

Manufacturers Record

Exponent of America

BRAMH PUBLIC DIST.
MURHAM, N. C.



\$6.50 per Year.
Single Copy, 20 Cents.

Baltimore, Md.
NOVEMBER 3, 1921

A WARNING TO THE NATION

During the high price period of abounding prosperity in 1919 the total value of our manufactured products was in round number \$62,000,000,000, of agricultural products \$24,000,000,000, and of mineral products about \$4,600,000,000, or about \$90,600,000,000.

With such a stupendous output at profitable prices it was possible for the country to carry the heavy taxation required to meet the expenses of the National Government. But under the false teachings of political economists and narrow-minded financiers, prosperity has broken down to a point where the total value of agricultural and manufactured and mineral products will this year certainly not exceed \$50,000,000,000. Possibly the figures will drop to \$45,000,000,000 or half of the value of the output of 1919.

But more than that; on the output of 1919 there was a wide margin of profit; on the output of 1921 there is a dead loss. Farmers are selling their output at less than actual cost of production, and we think it safe to say that the entire manufacturing interests of the country will in the aggregate not yield a dollar of profit during 1921. The profits made by some manufacturing interests will probably, we think, be entirely offset by the gigantic losses in others.

In 1919, with large profits, the enormous taxation expenses could be borne without serious trouble.

In 1921 low prices, without any profits, will yield very little revenue.

And yet the Government must collect under the present taxation plan \$5,000,000,000 a year for its expenses, while state, county, and city taxes are likewise enormously burdensome.

The business of the country cannot possibly stand such a drain under low prices. Present prices mean stagnation, poverty, unemployment and little or no profit to the vast majority of the agricultural and industrial interests of the country and to a very large proportion of the general mercantile trade. Counting all taxation, state, county, city and national, we will this year have to collect between 15 and 20 per cent of the total output of all the country's agricultural, manufacturing and mining interests. Continued much longer that would mean bankruptcy of all producing interests and ultimate national repudiation of obligations.

There is only one way to escape this inevitable outcome and that is by higher prices and larger profits, and these can only come through enlarged credit from all financial institutions, from that of the small country bank to that of the greatest dominant power of the country, the Federal Reserve System.

Continued low prices will lead to national and state confiscation of property or repudiation of obligations.

We cannot continue to collect 15 to 20 per cent of the total value of output, especially when this output is on an unprofitable basis to start with, without going straight down the toboggan to inevitable ruin.

The nation has followed the political economists, so-called, and the financial influences which have been fighting for low prices, until the nation is beginning to realize that it has been blinded by false teachings and led by blind teachers and is headed for the abyss unless a change is made very quickly.

Unless the Administration, the Treasury Department, the Federal Reserve System, and our bankers and political economists generally right-about face, and do it quickly, the nation will have to pay within the next few years a tremendous penalty for blunders of finance immeasurable in their evil consequences. Fortunately there are indications that these facts are at last being driven home into the Federal Reserve System and financiers generally.



Complete Equipment Plus Engineering Service

Plants equipped under the Allis-Chalmers plan of "Undivided Responsibility" include the complete apparatus necessary for their successful operation.

With the apparatus designed by its own engineering staff and built in its own shops, the Allis-Chalmers organization is able to include the complete equipment in a single contract, thus saving a purchaser the burden of handling the many details, disputes, delays and oftentimes expensive complications arising where a number of separate contracts are involved.

Allis-Chalmers engineering service is of the utmost value to a user in the selection of equipment suited to his particular conditions and in its economical operation for maximum plant efficiency.

Our Engineers are always pleased to be consulted

ALLIS-CHALMERS PRODUCTS:

Air Brakes	Hydraulic Turbines
Air Compressors	Mining Machinery
Cement Machinery	Oil Engines
Coal Mining Machinery	Perforated Metals
Condensers	Pumping Machinery
Crushing Machinery	Reciprocating Pumps
Electrical Machinery	Rolling Mill Machinery
Electric Hoists	Saw Mill Machinery
Farm Tractors	Steam Engines
Flour Mill Machinery	Steam Hoists
Forgings	Steam Turbines
Gas Engines	Timber Treating and Preserving Machinery

ALLIS-CHALMERS MANUFACTURING COMPANY

Milwaukee, Wisconsin, U. S. A.

District Offices in All Leading Cities.



Dow Open Type Spiral Chute in the plant of the Louisville Paint Co. handling cans of paint from upper floors to storage. The curved section at the bottom serves to slow up the cans within a short distance without injury.



Dow Closed Type Spiral Chute handling boxes of shoes from packing department to storage in the plant of the Brown Shoe Co., St. Louis, Mo.

Upstairs to Basement in an Instant

IN the increasing demand for intelligently planned conveying equipment, The Dow Steel Spiral Chute fills a peculiar need.

In sending products from upper to lower floors there is no type of medium that can possibly serve the purpose with greater facility and in the same brevity of time. Dow Chutes will convey packages of practically any character to points many floors below before an ordinary freight elevator, consuming considerable power and requiring the attention of an operator, could have moved a small fraction of the distance. They are arranged to receive automatically at any floor and require absolutely no attention from the day of installation.

Other types of Dow Equipment—Roller Gravity Conveyors, Belt Conveyors, Apron Conveyors, Inclined and Vertical Elevators, Bucket Elevators, Screw Conveyors, etc.—fulfill all other possible conveying requirements. Whatever your product, there is a Dow Conveyor that can handle it at a saving of time, labor, money.

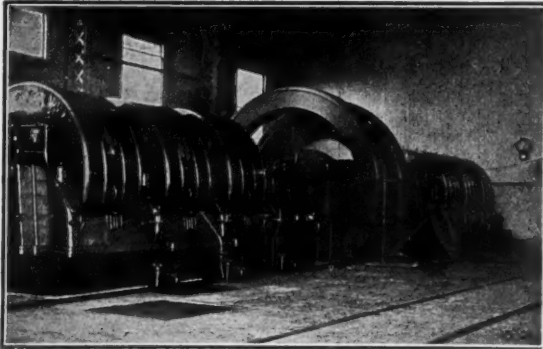
Write The Dow Co., Incorporated, Louisville, Ky. New York Office, 50 Church St. Chicago Office, 1235 Old Colony Bldg. Detroit Office, 8855 Woodward Ave. Philadelphia Office, 1212 Arch St. Representatives in other principal cities. Canadian Representatives, Jones & Glassco, Reg'd., Montreal, Canada.

"Let Gravity Do It"



CONVEYORS

DE LA VERGNE OIL ENGINE



1080 H. P. De La Vergne Diesel Oil Engine at Waipahu-Oahu, T. H.

A thoroughly reliable and simple full Diesel Oil Engine of high economy. Burns any kind of commercial liquid fuel-consumption 4/10 of a pound per horsepower hour.

The first De La Vergne oil engines built 28 years ago are still running. Several hundred thousand horsepower of De La Vergne engines are in operation today.

Send For Our Bulletin

De La Vergne Machine Company



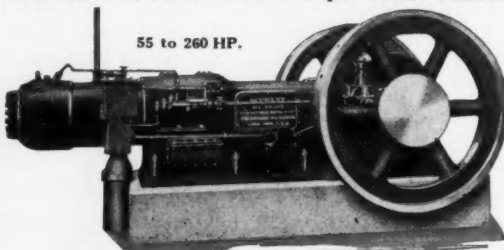
1107 East 138th Street

NEW YORK, N. Y.

BUCKEYE OIL ENGINES

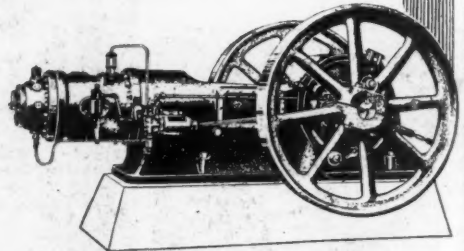
for

Factory, Mill, Mine and Municipal Power Plants.



THE BUCKEYE MACHINE CO.
LIMA, OHIO.

**Internationally
known and
used**



THE distribution of Bessemer Oil Engines is world wide. No other power equipment combines so many advantageous features. Less floor space needed, compactness and simplicity of design. No skilled labor required for its operation. These economies plus the low cost of operating on any grade of fuel oil make the Bessemer ideal for any power requirements 15 to 180 H. P. Write for catalog.

THE BESSEMER GAS ENGINE CO. 64 York St., Grove City, Pa.

BESSEMER OIL ENGINES

ENGINES BOILERS

Steel Casing Settings, Heaters, Stacks, Tanks, Stills
THE HOUSTON, STANWOOD & GAMBLE Co.
CINCINNATI

CORLISS ENGINES



Boilers of All Styles and Sizes

Murray Iron Works Co.
BURLINGTON, IOWA

Incorporated February 1, 1870

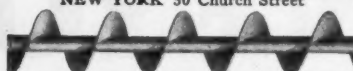
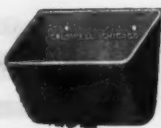
Paul Bigelow, 39-41 Cortlandt St., New York City. W. M. Jackson, Bourne Bldg., Phila., Pa.

CALDWELL



HALF a million dollars worth of well selected stock, constantly maintained, and an organization keyed up to the theory that plant efficiency is measured by the number of orders shipped on the day of receipt, accounts for Caldwell service. Let us figure on your requirements.

H. W. CALDWELL & SON CO.
LINK-BELT COMPANY, Owner
CHICAGO, 17th St. and Western Ave.
DALLAS, TEXAS, 709 Main Street
NEW YORK 50 Church Street

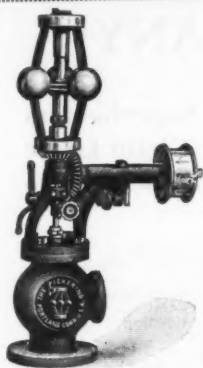


ENGINES BOILERS TANKS TOWERS SMOKE STACKS

If you are in the market for the above, get our prices. We are Southern Manufacturers, and not only manufacture, but guarantee our products. We want you to take advantage of our 50 years' experience.

Write us for further information
and become a satisfied customer.

SCHOFIELD'S IRON WORKS
Dept. H
MACON, GA.



Class B type

GAS ENGINE GOVERNORS

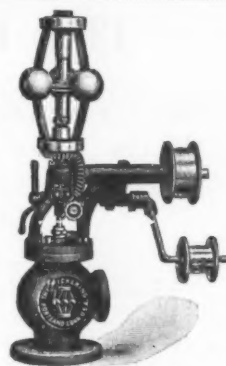
Because of the excellent showing that Pickering Governors have made on Steam Engines in the past, many operators are consulting with us as to adaption of our JOINTLESS principle to Gasoline Engine control and we have shown desired results in a simple and effective manner.

We will be glad to confer with any parties dissatisfied with present equipment, showing what we can do as solution of their problem—yet without their incurring any obligation as to purchase.

THE PICKERING GOVERNOR COMPANY

Portland, Conn., U. S. A.

Have you noticed "Pickering" Top in cut of "American" Semi-Diesel Oil Engine?



Class A type

Gas Combination Burners

Burns either gas or oil separately or together; simple of installation, operation and construction.

Send for Our "Save Fuel" Circular

GASO PUMP & BURNER MFG. CO.
TULSA, OKLAHOMA

"Walls" Everlasting Oilers

of Braze Steel, specially designed for Strength. Every joint brazed with Hard Spelter. Red Heat or the roughest usage will not cause a leak.

Our Specialties Include

Oil Caps	Bells
Fillers	Gongs
Torches	Belt Fasteners
Hand Lamps	Ice Cans, Etc.

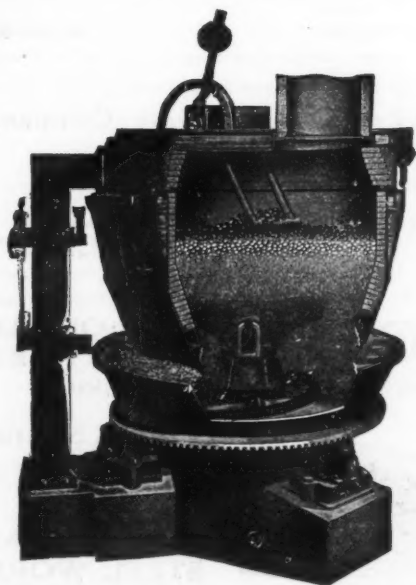
These goods are warranted of the greatest possible durability, and the best obtainable quality.

Ask for Catalogue

The P. Wall Mfg. Supply Co.
Allegheny, Pa.



The Machine of Absolute Satisfaction



Selected by every large purchaser in the steel industry since the Armistice. Four hundred ordered in the first four years.

POKERLESS PRODUCER-GAS MACHINE

Users everywhere testify with one voice to the superior satisfaction and low maintenance expense of this splendid machine. Difference in first cost comes back annually, every detail built for endurance.

Morgan Construction Company
WORCESTER, MASS.

Pittsburgh Office: 704 Arrott Bldg. Telephone: Court 1381

THE BABCOCK & WILCOX COMPANY

85 LIBERTY STREET, NEW YORK

**Builders since 1868 of
Water Tube Boilers
of continuing reliability**

BRANCH OFFICES

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PHILADELPHIA, North American Building
PITTSBURGH, Farmers Deposit Bank Building
CLEVELAND, Guardian Building
CHICAGO, Marquette Building
CINCINNATI, Traction Building
ATLANTA, Candler Building
TUCSON, ARIZ., 21 So. Stone Avenue
FORT WORTH, TEX., Flatiron Building
HONOLULU, H. T., Castle & Cooke Building



WORKS

Bayonne, N. J.
Barberton, Ohio

**Makers of Steam Superheaters
since 1898 and of Chain Grate
Stokers since 1893**

BRANCH OFFICES

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NEW ORLEANS, 521-5 Baronne Street
HOUSTON, TEXAS, Southern Pacific Building
DENVER, 435 Seventeenth Street
SALT LAKE CITY, 705-6 Kearns Building
SAN FRANCISCO, Sheldon Building
LOS ANGELES, 404-6 Central Building
SEATTLE, L. C. Smith Building
HAVANA, CUBA, Calle de Aguiar 104
SAN JUAN, PORTO RICO, Royal Bank Building

HEINE LARGE UNIT BOILERS

Longitudinal Drum Water
Tube Boilers.

Cross Drum Water Tube
Boilers.

Boiler Casings, Steel Stacks.



All Heine Boilers Conform to
A. S. M. E. Boiler Code.

Catalogs Gladly Sent on Request.

Heine Boiler Company
St. Louis, U. S. A.

BOILER TUBES

FOR ALL TYPES OF BOILERS

Especially bent tubes for vertical water-tube boilers

Also carry a large stock of straight tubes.
Write, phone or wire for quotations.

BOILER TUBE CO. OF AMERICA

Main Office:

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NEW YORK OFFICE:
1816 Woolworth Bldg.

CHICAGO OFFICE:
809 Peoples Gas Bldg.

BIRMINGHAM, ALA., 902 First Nat'l Bank Bldg.



Specialists in
Inspecting and Repairing
all types of

Brick and Concrete Chimneys
while your plant is in operation.

Acme Chimney Company

31 Nassau St., New York Rector 365

HARTLEY BOILER WORKS

**BUILDERS OF
HIGH GRADE BOILERS**

Stand Pipe, Self-supporting Stacks, Tanks, Towers, all kinds
of Structural and Plate Iron Work, Boiler Fronts, Grate Bars,
all kinds of Castings.

MONTGOMERY

ALABAMA

RUST CHIMNEYS

RADIAL BRICK AND REINFORCED CONCRETE
REFRACTORY BRICKWORK

THE RUST ENGINEERING CO.
ENGINEERS AND CONTRACTORS

Pittsburgh

Washington

Birmingham

Cherokee Coal & Coke Company

Miners—Shippers

Steam and Domestic Coal

Southern and L. & N. Ry. Shipments

Knoxville, Tenn.

GENERAL OFFICES

Holston Nat'l Bank Building
Knoxville, Tennessee

ATLANTA OFFICE

O. M. Bowling, Sales Agent
33 Langhorn Street



RADIAL BRICK CHIMNEYS
ALPHONS
CUSTODIS CHIMNEY
Construction Company

Also EXPERTS in
Repairing Brick and Concrete Chimneys
Heightening Chimneys

Lightning Rods Installed and Repaired

Work done while chimney is in operation, if necessary
New York Atlanta Richmond Baltimore

CHARLESTON DRY DOCK & MACHINE CO.

Successors to VALK & MURDOCH CO.

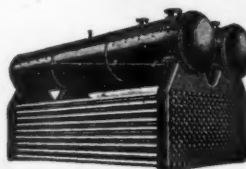
MARINE AND STATIONARY BOILERS
Repairs to Steel and Wooden Vessels

8,000-ton Dry Dock - 1,500 and 600-ton Marine Railways

CHARLESTON, S. C.

BOILERS OF ALL TYPES

WITH OR WITHOUT STEEL CASINGS



**TANKS and
TOWERS**

**STRUCTURAL
STEEL WORK**

THE WALSH & WEIDNER BOILER CO.

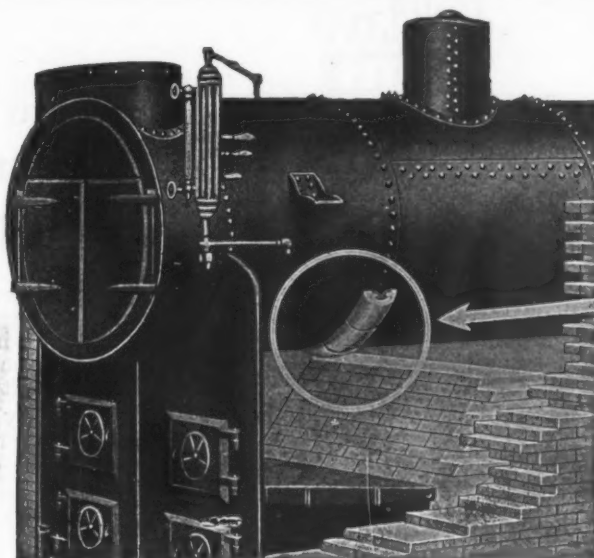
CHATTANOOGA, TENN.

BRANCH SALES OFFICES

New York New Orleans Memphis San Francisco Havana

Put The National On The Job and Stop Your Repair Bills

*The National acts
as a barrier to the
sudden changes of
temperature.*



The National Girth Seam Protector is composed of a refracting tile covering the seam which equalizes the temperature, thereby eliminating sudden expansions and contractions of the metals.

This cuts out the repair bills. The National Girth Seam Protector can be easily and quickly applied by unskilled labor.

NATIONAL BOILER PROTECTOR COMPANY DAYTON, OHIO
U. S. A.

STOP WASTE FROM BOILER SCALE

You know what it means to shut down to remove boiler scale caused by hard water—the possible delays in manufacture, the wasted labor.

All this waste can be promptly stopped by any good water softener.

But do you realize that many other water softeners are costly to operate? And the Borromite Rapid Rate Water Softener does not require a storage tank for its successful and economical operation to supply you with all the soft water you need—any time you want it.

Write for Booklet—FREE

THE BORROMITE COMPANY OF AMERICA

Department 1502.

105 West Monroe Street

Chicago, Ill.

(Established 1855)
A. K. ROBINS & COMPANY
CANNING MACHINERY AND SUPPLIES
For Fruits, Vegetables, Sea Food, Etc.

Write for Catalog

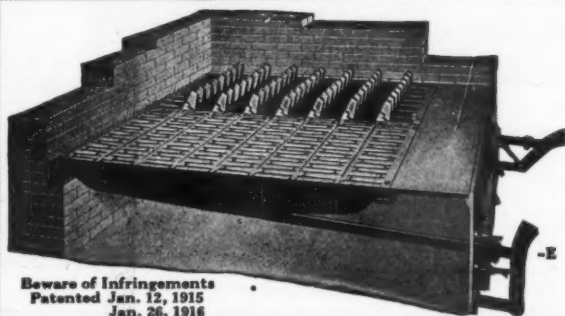
115 MARKET PLACE BALTIMORE, MD.

"IF IT'S FOR A CANNING FACTORY, WE HAVE IT"

Double-Shift Rocking Grates

Have 10% more air space than any other grate made. Designed for hard or soft coal.

Nute, McGehee, Geary Co., Inc.
Chambersburg Pennsylvania



Beware of Infringements
Patented Jan. 12, 1915
Jan. 26, 1916

The Armstrong Grate

Is an Ash Sifter, a Vibrating Grate, a
Shaking Grate and a Dumping Grate

It has a new improved shaking mechanism that is fool-proof. By lifting bar "E" the grates will dump clinkers 6 inches thick. When bar "E" is down, it is a sifter and vibrating grate, the grate bar fingers opening just enough to let the fine ashes through and push clinkers loose; the fingers raise and lower 4 inches without increasing the grate opening. Hence there can be no loss of coal when shaking. Its wonderful durability is explained by the fact that 90 per cent. of the weight is in the grate where it belongs—not in useless framework. Write for full details and prices.

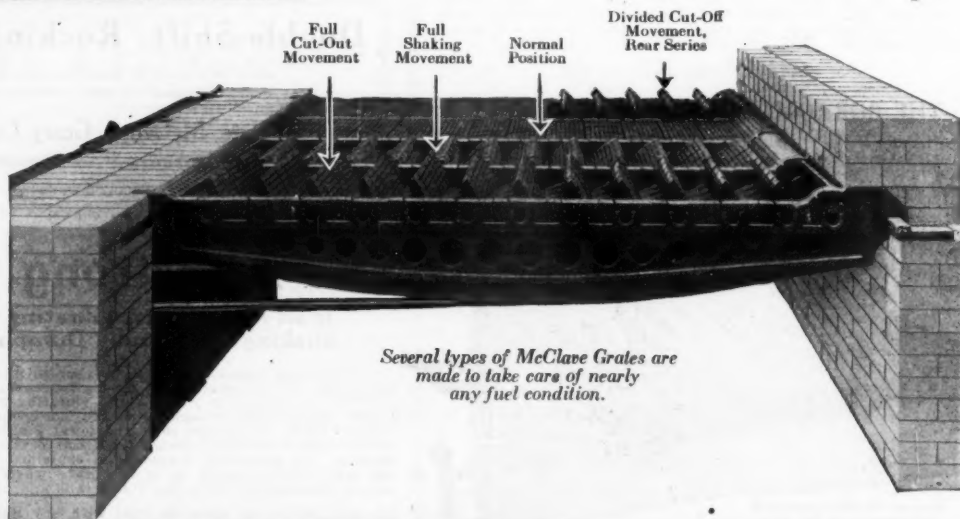
We will put in our grate on trial with any Shaking Grate on the Market, and do it at Our Expense.

Armstrong Manufacturing Company, Springfield, Ohio

Dept. M



Where stokers cannot be installed, shaking and dumping grates with properly proportioned air spaces can secure important economies.



Several types of McClave Grates are made to take care of nearly any fuel condition.

Can You Manufacture Your Own Power Cheaper Than You Can Buy It?

THE reason that the central stations can sell power cheaper than many industrial establishments can make it in their own boilers is because they so operate their plants that they convert into power every available unit of heat in their coal.

They manufacture power to sell it at a profit. If what you sold were power, you would insist upon having your production costs as low as possible.

In no other single department of your plant can you make greater economies than in the boiler room where from 60% to 80% of your power costs are absorbed by the changing of coal into steam.

There is furthermore no other part of your plant in which you can effect greater economies with so small a change of equipment. Whether your boilers are large or small (even if less than 50 H.P.) you will be interested in knowing more about McClave Combustion Systems.

Write for information.

McCLAVE-BROOKS COMPANY

Makers of the Famous McClave Grates since 1883
Scranton, Pennsylvania

New York: 1502 Printing Crafts Bldg.
S. C. Smith, Manager

Chicago: 515 Hearst Bldg.
F. G. Smith, Western Manager

Philadelphia: 610 Morris Bldg.
Geo. Blair, Jr., Manager

Pittsburgh: 1623 Oliver Bldg.
H. L. Hergett, Manager

Boston: 261 Franklin Street
A. R. St. John, Manager

Syracuse: 130 Hope Avenue
W. H. Goodrich, Representative

Dallas: 765 Elm Street
D. G. Counts, Representative

Charlotte: 213 S. Myers Street
J. C. Sanders, Manager

McClave COMBUSTION SYSTEMS *for greater economy*

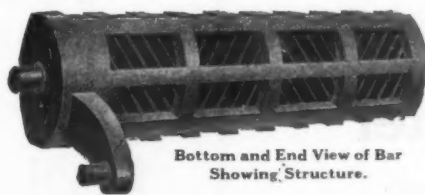
THOMAS

cleans from the Bottom

Coal is placed in a furnace on top of the fire, the incandescent part is immediately beneath, and the incombustible refuse lies at the bottom of all, next to the grate.

Most fires are cleaned from the top, an unpleasant operation which does not adequately clean and which cuts the fire-bed into lumps and ridges, reducing its steam-making powers and wasting time, fuel and money.

Thomas Elliptical Wiggling, Shaking, Dumping Grate Bars clean the fire absolutely **from the bottom** without disturbing it in any way. The fire doors are not opened during the operation and the fire is cleaner than it is possible to make it by the old methods.



Bottom and End View of Bar
Showing Structure.

THOMAS GRATE BAR COMPANY

BIRMINGHAM, ALA.

CHICAGO, ILL.
Railway Exchange Bldg.

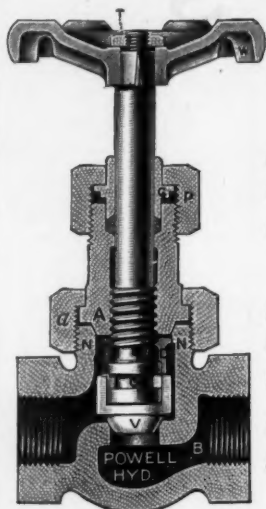
CLEVELAND, O.
Hippodrome Bldg.

NEW ORLEANS, LA.
315 Board of Trade Bldg.

NEW YORK CITY
2 Rector Street

POWELL

DOUBLE EXTRA HEAVY VALVES



REGRINDING
HYDRAULIC
VALVES

Globe, Angle, Cross
Gate or Check Patterns
for controlling at

HIGH PRESSURE
Steam, Water, Oil, Air,
Gas or Chemical Solu-
tions

UNEQUALLED FOR
SEVERE SERVICE

The Wm. Powell Company
CINCINNATI, OHIO



DIXON'S IS SAVING COAL FOR US!

"I don't mind admitting that we make more steam per square foot of heating surface than most plants. The boss got tired buying coal to heat the stone lining of the boilers and the men never enjoyed chopping out the scale anyway. So everybody was glad when Dixon's Boiler Graphite was given a trial.

"Did not notice much improvement the first time the boilers were opened, but each time since it has been a cinch to rattle out the scale. The inspector says that our boilers are in fine condition: the men are satisfied; and the company is buying much less coal than in the old days.

"Tell your manager to write to the Dixon Company and ask for their booklet No. 80-T. It will open his eyes as to the ease of keeping boilers clean from scale."

DIXON'S
Pioneer
Boiler
Graphite

JOSEPH DIXON CRUCIBLE COMPANY

JERSEY CITY, NEW JERSEY
Established 1827

We also make

- ☐ Cup Grease
- ☐ Joint Compound
- ☐ Silica-Graphite Paint
- ☐ Waterproof Grease
- ☐ Flake Graphite
- ☐ Motor Brushes
- ☐ Solid Belt Dressing
- ☐ Paste Belt Dressing
- ☐ Boiler Graphite

Write for catalog, Mark 3, to square

FOSTER SUPERHEATERS

A necessity for turbine protection, engine cylinder economy and utilization of superheat for all its benefits.

POWER SPECIALTY COMPANY Boston, Philadelphia, Pittsburgh, Kansas City, Chicago, San Francisco, Dallas, London, Eng. 111 Broadway, NEW YORK

We keep others in

Hot Water

Submit your water-
heating problems to

THE SIMS COMPANY
ERIE, PA.

THE QUALITY UNION

The Dart is the Quality Union, and quality is always cheapest.

The Dart is made of Malleable Iron, with extra heavy pipe ends and with double seated ball joint formed of bronze rings.

IN DART UNION THERE IS DOUBLE STRENGTH



E. M. DART MFG. CO.
PROVIDENCE, R. I.

The Fairbanks Company, Sales Agent
Dart Union Co., Ltd., Toronto, Canada

Machine Tools
Tool Grinders
Drill Grinders
Steam Hammers
Sand Mixers

William Sellers & Co. Incorp.

PHILADELPHIA, PA.
Shafts, Pulleys, Hangers, Couplings, Etc.

Locomotive Injectors
Valves, Strainers
Boiler Washers
Boiler Testers
Safety Squirts



The advertisement features several illustrations of Jenkins valves: a large globe valve at the top left, a smaller globe valve below it, a large industrial valve in the center, and a smaller valve at the bottom left. A central illustration shows a factory with smoking chimneys and a train, with a diamond-shaped logo containing the text "TRADE JENKINS MARK" overlaid. A large, detailed illustration of a multi-story building, identified as the Equitable Building, is shown on the left side.

TRADE JENKINS MARK

Maximum Service

--the smallest, the largest, all Jenkins Valves

A valve that is operated often, or one that is continually under high pressures gets more than average service. Usually on lines and in places where such service exists you will find Jenkins Valves. They are made for the maximum service, not merely the average and may be installed with confidence in their satisfactory performance.

Two examples of serviceability typical of Jenkins Valves everywhere are:

A 36-inch Jenkins Brass Globe Valve installed on a line to ice dumping apparatus in plant of Cresson Ice Co., Altoona, Pa., is opened and closed over 200 times a day. This is more than average service, and requires a heavy, substantial, wear-resisting valve—naturally Jenkins was selected.

In the Equitable Building, New York, forty stories with floor area of 2,000,000 square feet, where pressures are high, and where safety of life and property, fuel economy, and power efficiency are dependent upon valves, you will find Jenkins Valves—large extra heavy iron body valves, standing higher than a man, and hundreds of smaller types.

Jenkins Valves are made in types and sizes to meet all requirements of power plant, plumbing, heating, industrial, and other service. For over half a century they have been specified without hesitancy by architects, engineers, plumbers, steamfitters, and others who know valves and valve requirements.

Genuine Jenkins Valves are known by the Jenkins Diamond Mark and signature—at supply houses everywhere.

Write for data on the valves in which you are interested.

JENKINS BROS.

New York	Boston	Philadelphia	Chicago
Montreal		London	Havana

FACTORIES: Bridgeport, Conn.; Elizabeth, N. J.; Montreal, Canada.

Jenkins Valves

SINCE 1864

STRENGTH



Back of every Vogt Fitting is the strength of drop forged construction. This means shaped from solid steel with powerful hammers, then finished—no flaws or cracks. They are absolutely reliable under high pressures and temperatures of oil, gas, air, water, ammonia, steam and superheated steam.

Vogt

Drop Forged Steel Valves and Fittings

*Write Today For Sample
Fitting and Bulletin F. 5*

VOGT DROP FORGED FITTINGS CAN BE PURCHASED FROM OUR AGENTS

METALWOOD MFG. CO., DETROIT, MICH.
PITTSB'GH VALVE, FDY. & CONST. CO., PITTSB'GH, PA.
JOHN SIMMONS CO., NEW YORK, N. Y.

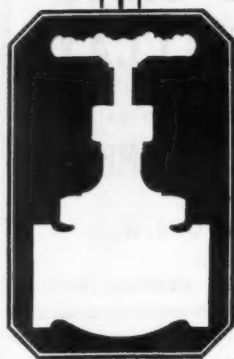
WALWORTH MFG. CO., BOSTON, MASS.
WALWORTH MFG. CO., CHICAGO, ILL.
WALWORTH MFG. CO., SEATTLE, WASH.

Henry Vogt Machine Co.
Incorporated
LOUISVILLE, KY.

BRANCH OFFICES: NEW YORK, CHICAGO, TULSA, OKLA.

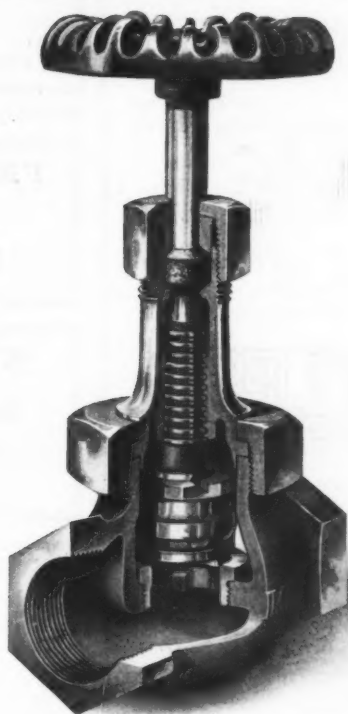
MANUFACTURERS OF DROP FORGED STEEL VALVES AND FITTINGS :: WATER TUBE & HORIZONTAL
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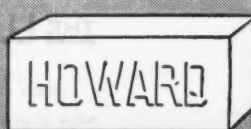
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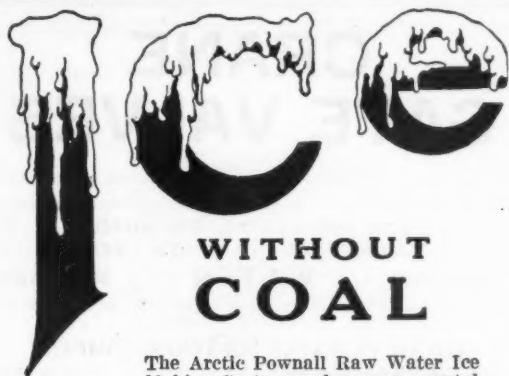


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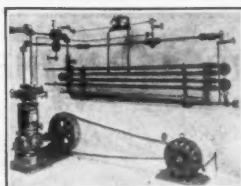
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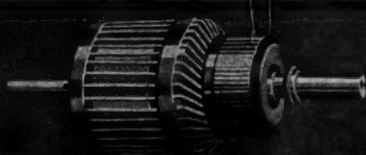
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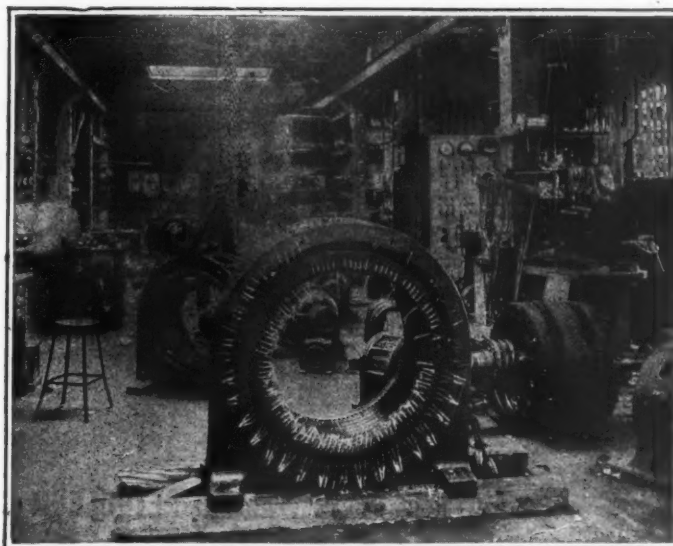
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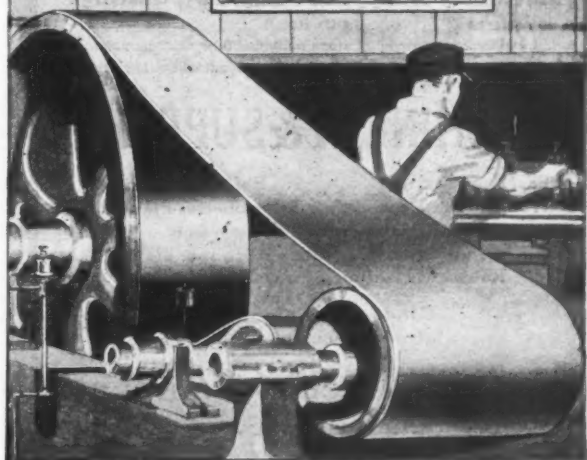
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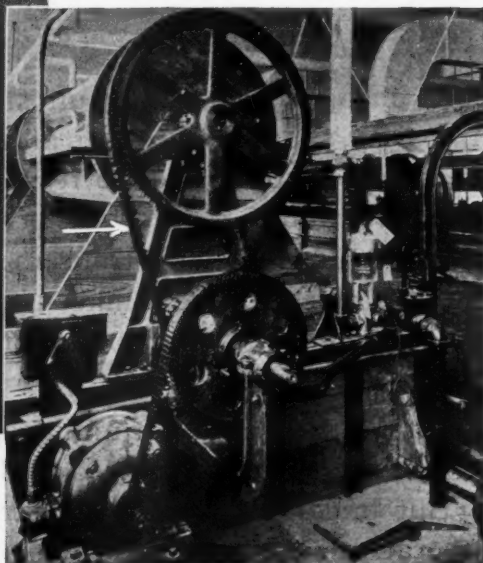
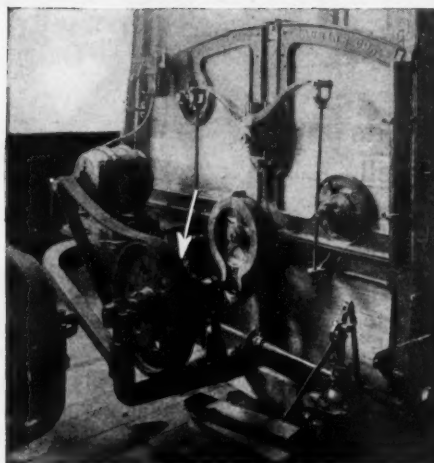
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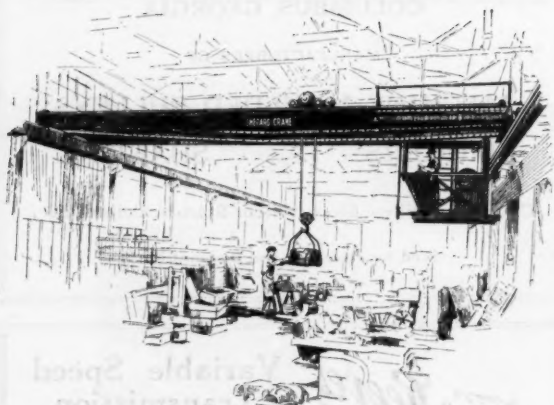
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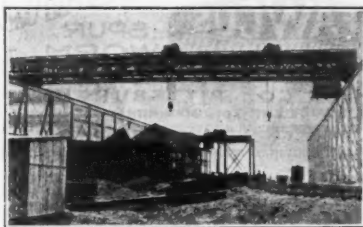
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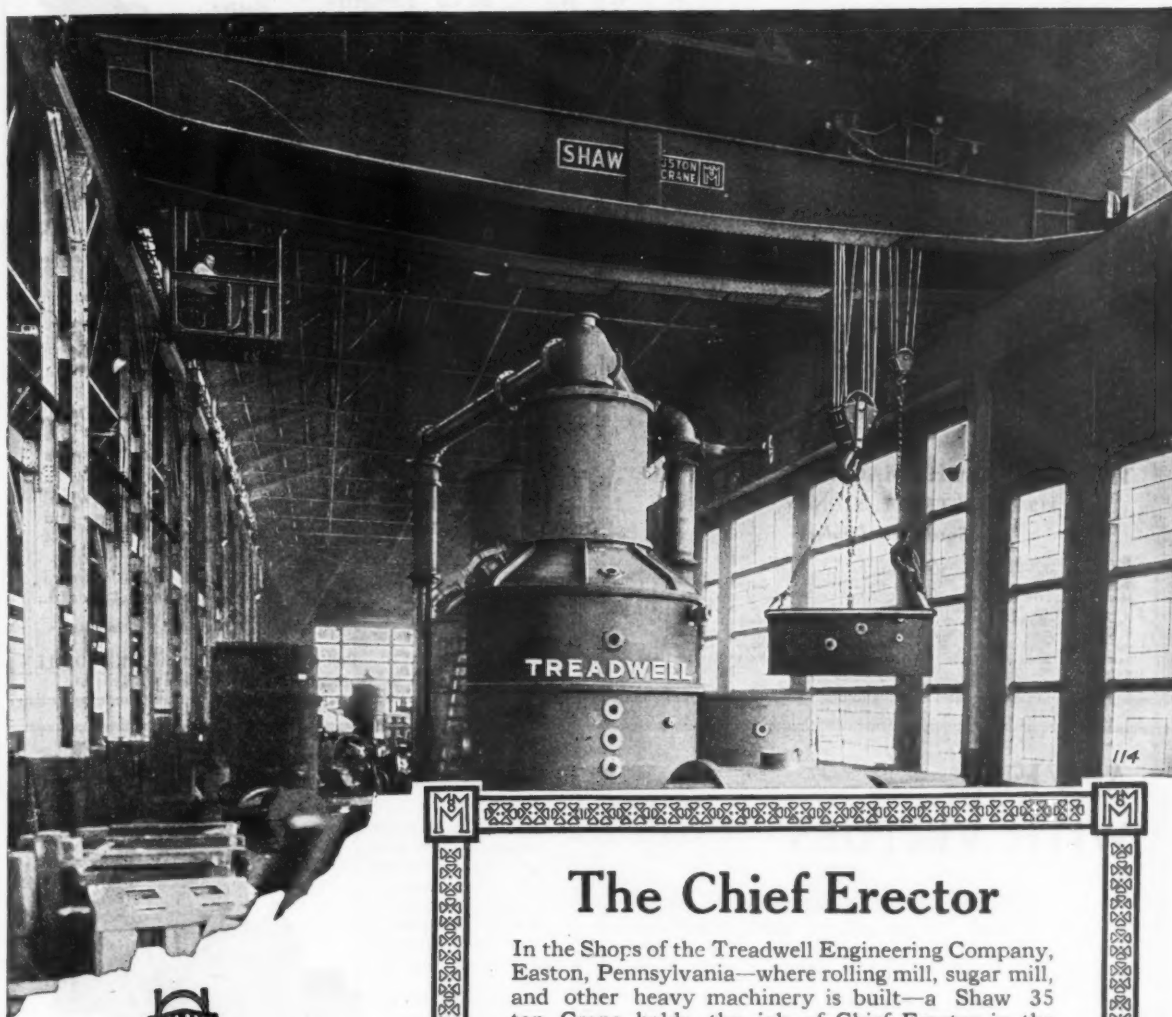
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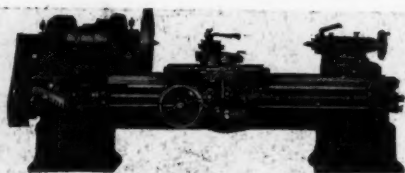
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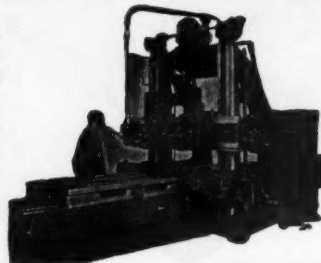
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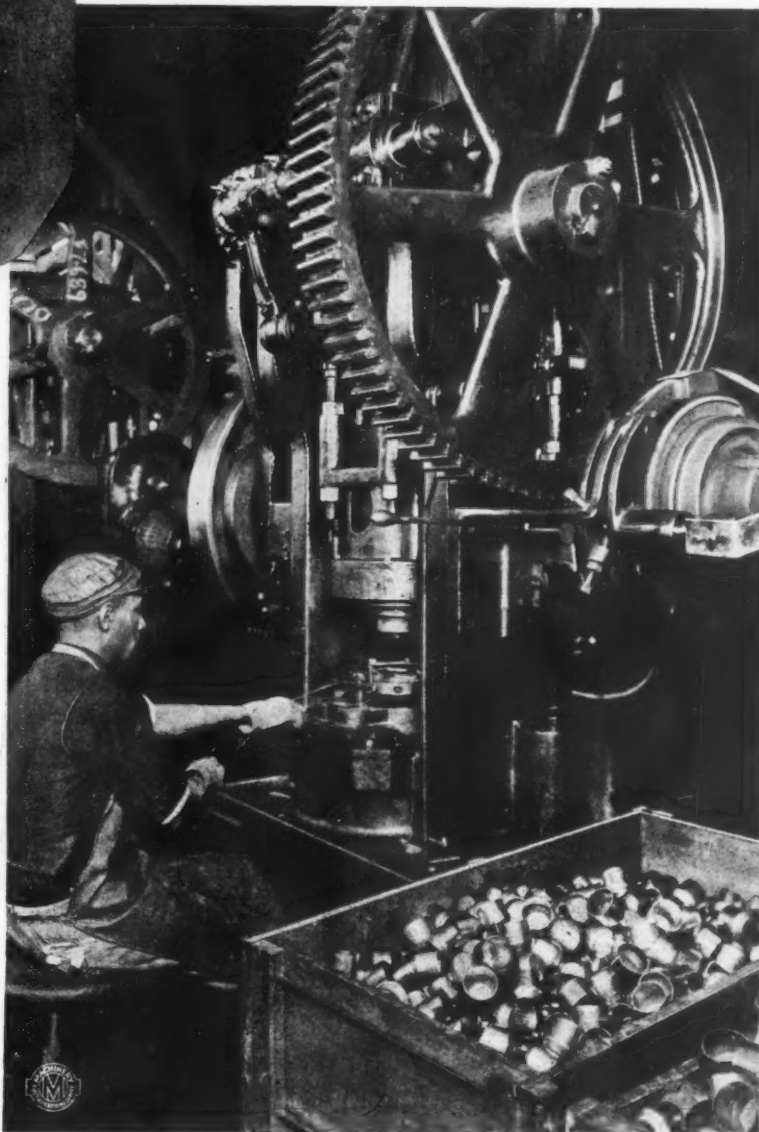
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The blank holder cuts the blank and the punch drives it through the drawing die. Output is 14,000 per ten-hour day. Subsequent drawing operations performed on these shells produce the perfect ball.



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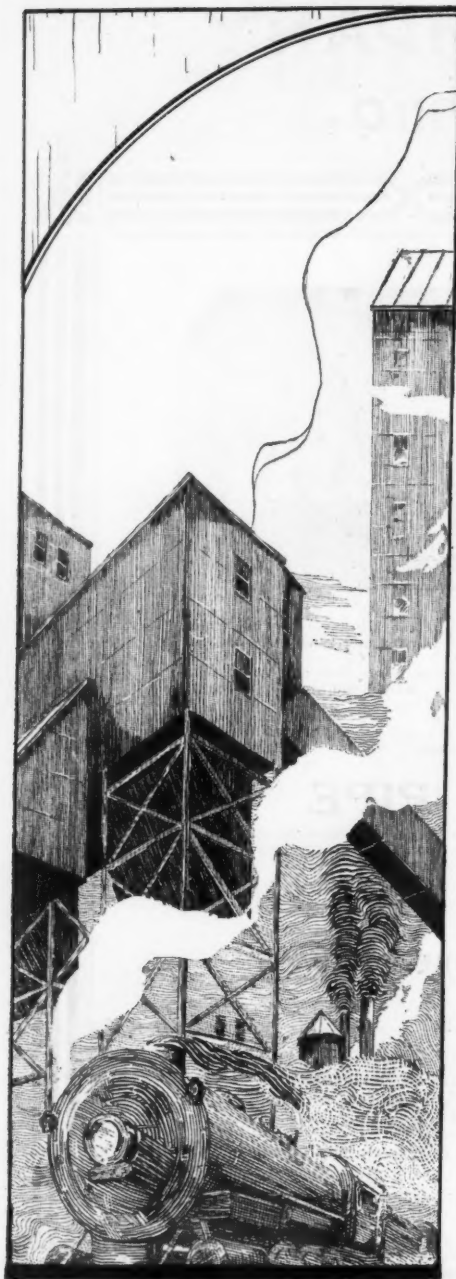
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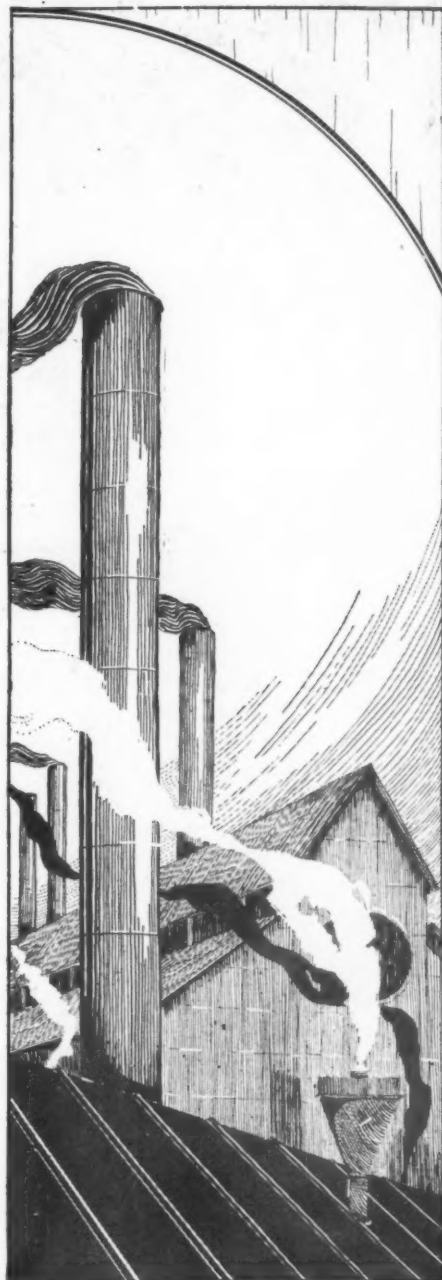


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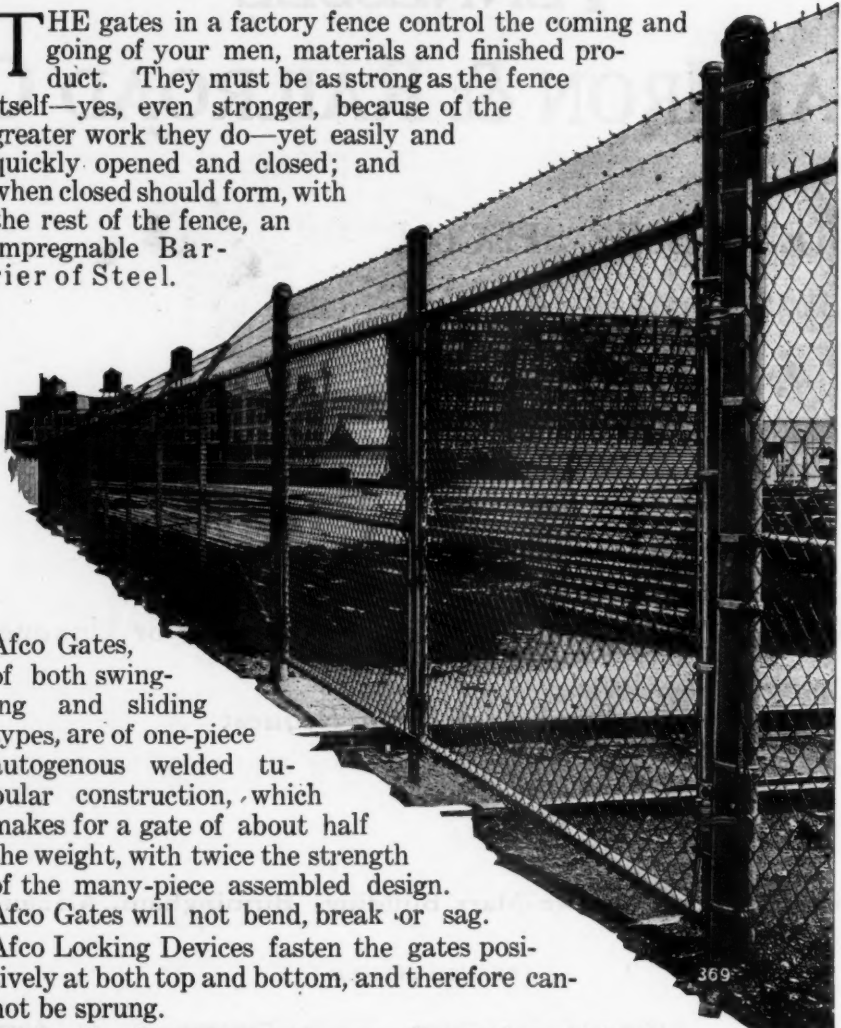
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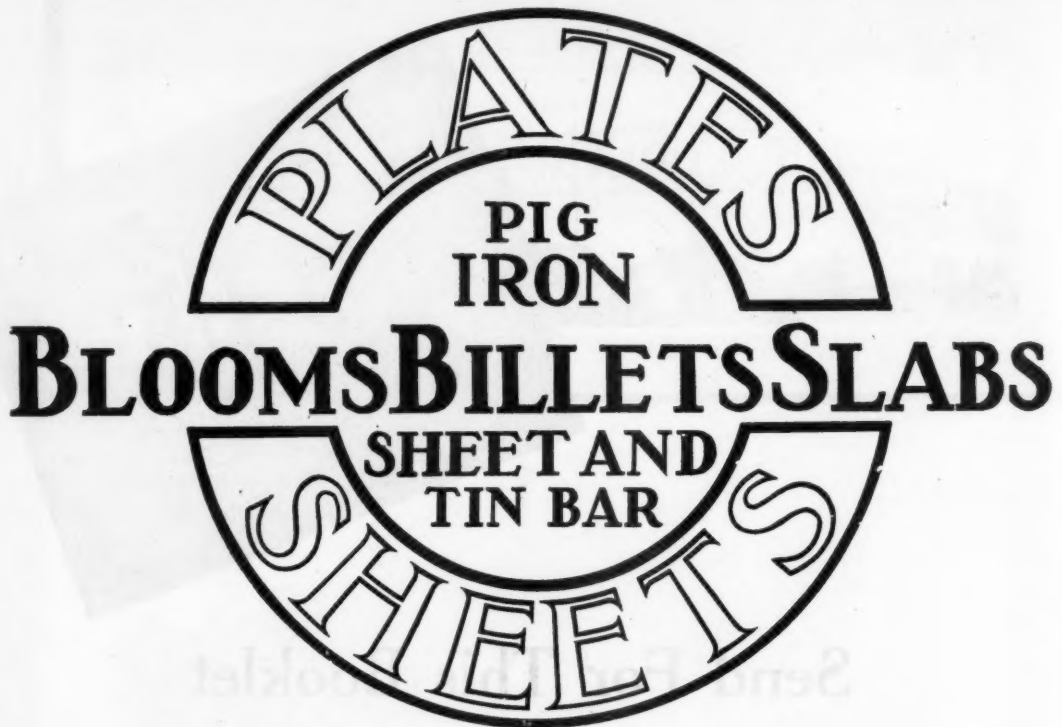
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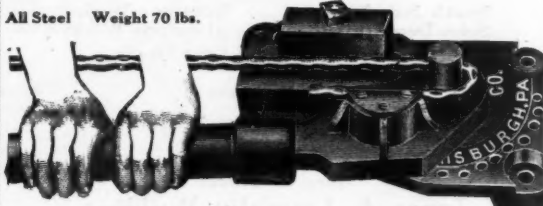
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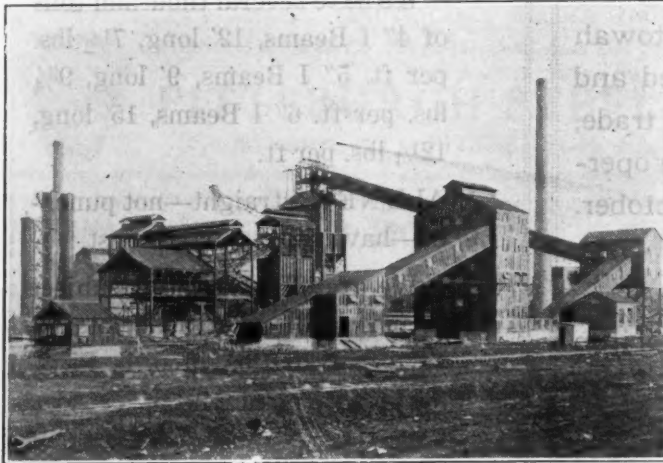
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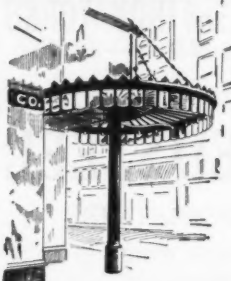
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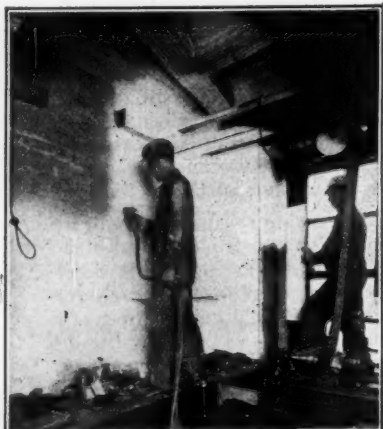
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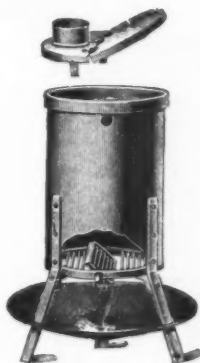
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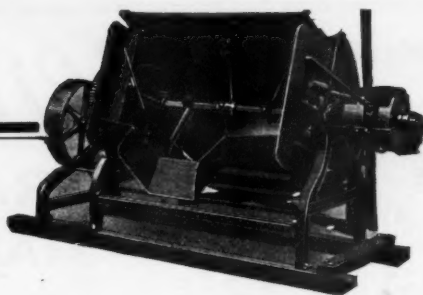
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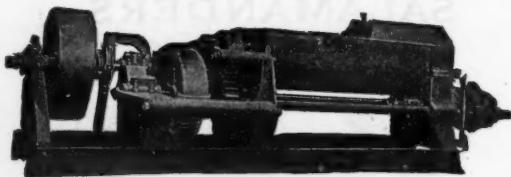
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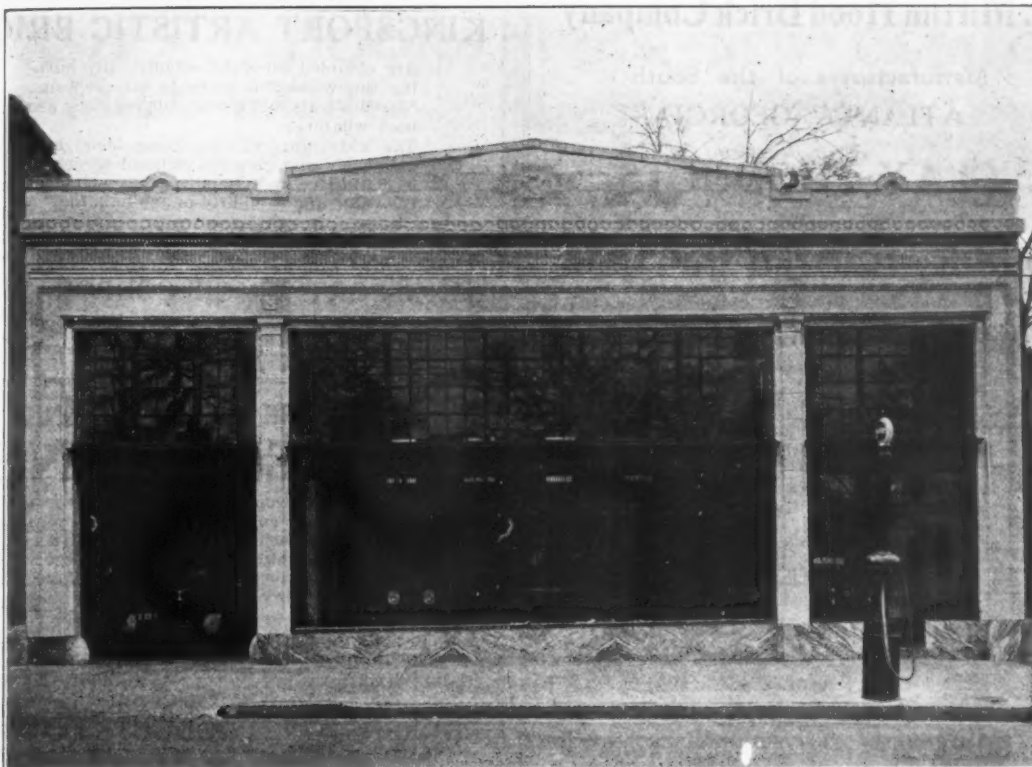
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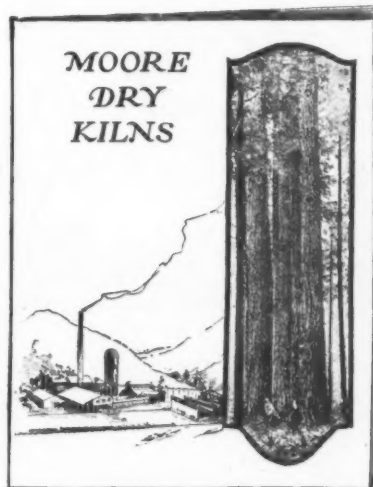
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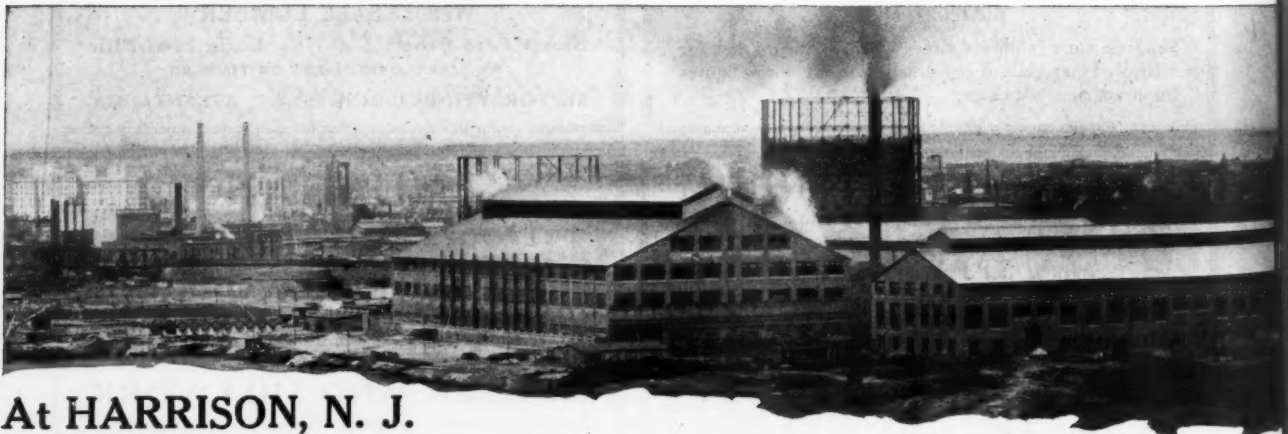
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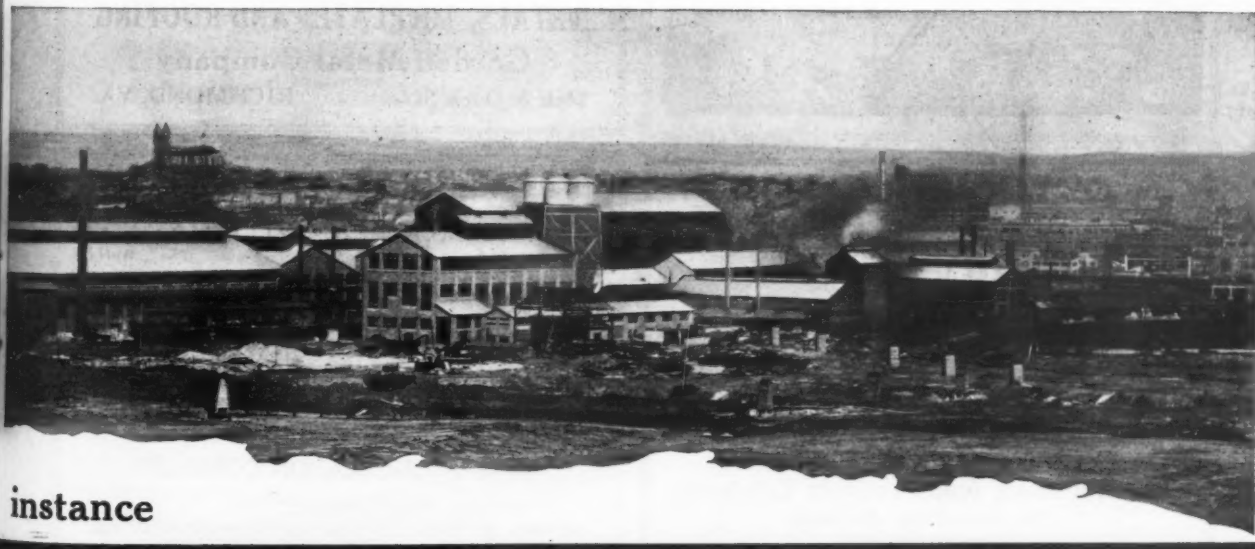
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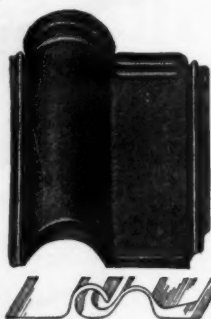
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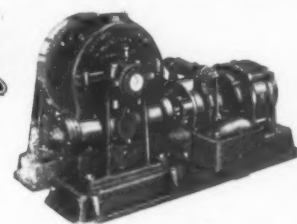
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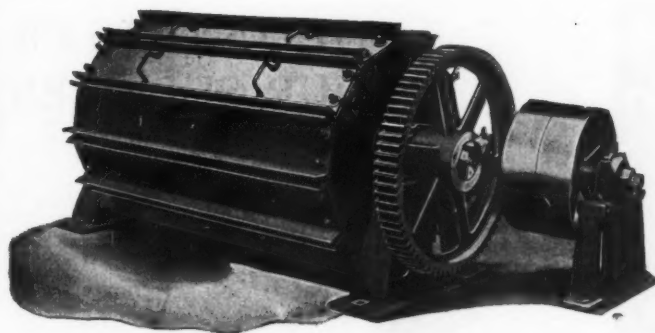
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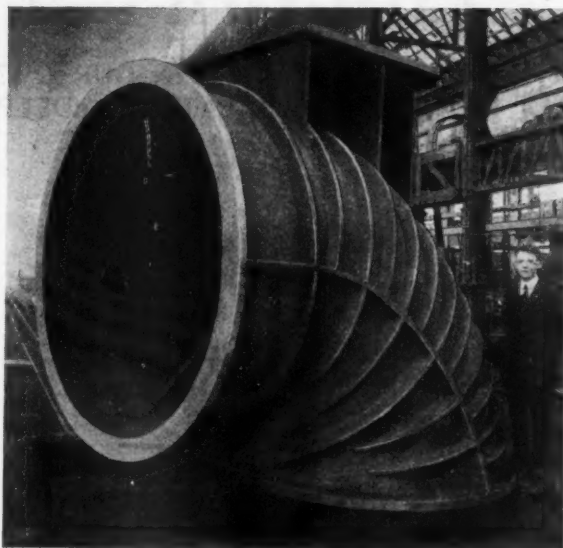
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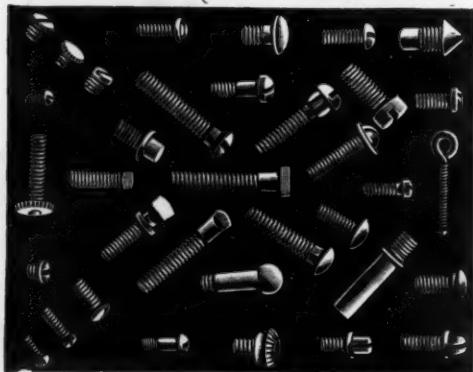
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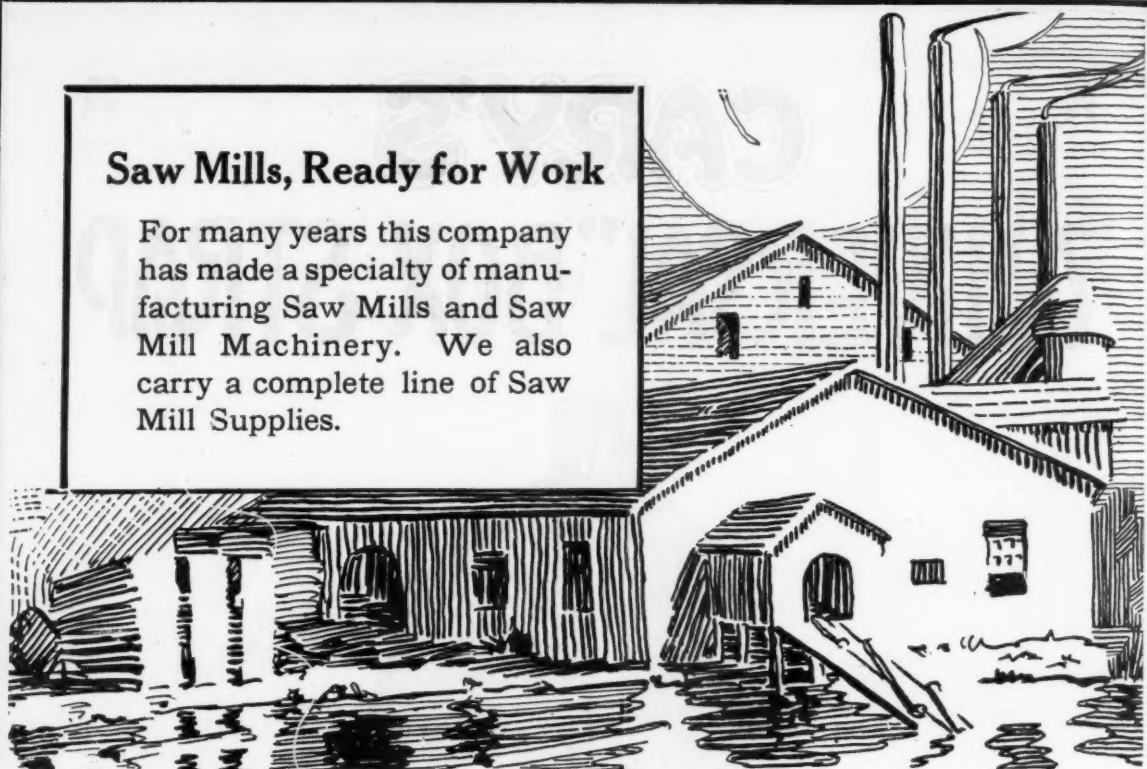


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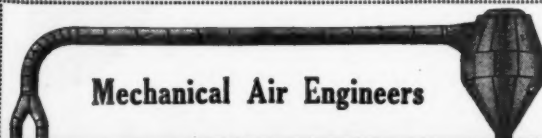


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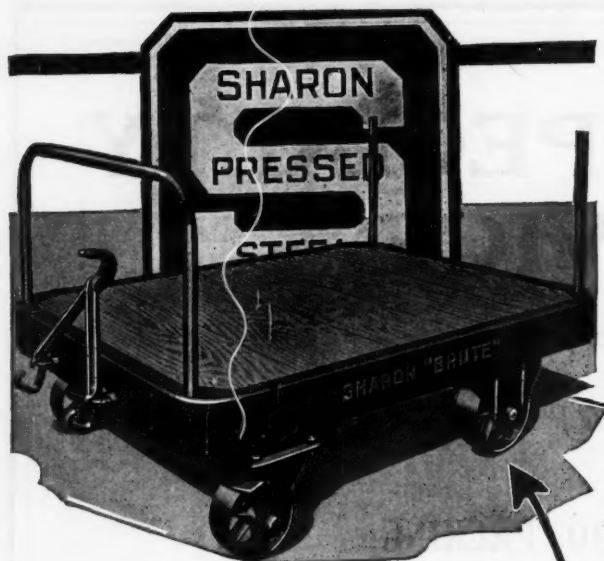
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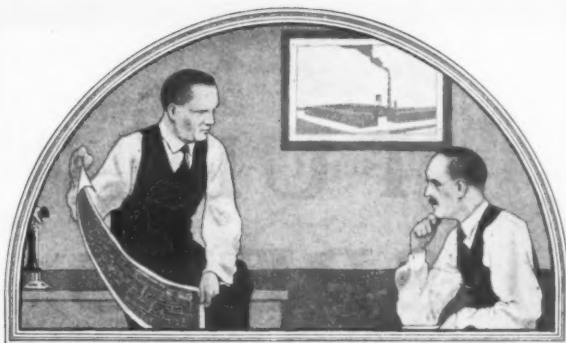
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PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO., BALTIMORE, MD.

Branch Offices: New York, 30 Church St.; Chicago, 11 South La Salle St.; Boston, 734 Old South Bldg.; St. Louis, 915 Olive St.
Washington, Whaley-Eaton Service, 456-459 Munsey Building.

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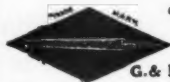
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Vol. LXXX, No. 18
WEEKLY.

BALTIMORE, NOVEMBER 3, 1921.

{ SINGLE COPIES, 20 CENTS,
\$6.50 A YEAR.

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO.

Office: Manufacturers Record Building, Cor. Commerce and Water Sts.
BALTIMORE, MARYLAND

RICHARD H. EDMONDS, President VICTOR H. POWER, Treasurer
FRANK GOULD, Vice-President I. S. FIELD, Secretary
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BRANCH OFFICES:

CHICAGO, 11 So. La Salle St. NEW YORK, 30 Church St.
ST. LOUIS, 915 Olive St. BOSTON, 734 Old South Bldg.
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In order to avoid delays all correspondence pertaining to news or advertising matters should be addressed directly to the Manufacturers Record, Baltimore, Md., and not to individual editors, officers, employees or any branch office.

IMMEDIATE OCCASION FOR USE OF GOVERNMENT'S SHEFFIELD POWER PLANT.

BY tying together the various power plants of North and South Carolina, Georgia, Tennessee and Alabama in a manner outlined a number of years ago by the MANUFACTURERS RECORD as a possibility of great potential value to the South, the Alabama Power Co., from its steam power plants at Gadsden and on the Warrior River is today serving distressed cotton mills, public utilities and the like throughout the Carolinas, in some instances 400 miles distant from points where power is generated. A condition of low water in Southern States has caused a dearth of waterpower in many sections. As the transmission lines of the major companies were inter-connected during the war at the suggestion of the War Industries Board, waterpower and steam plants are thus enabled to meet public demands in a manner that would otherwise be impossible. Were it not for this tying up of the various lines, there are a number of industrial centers in the South that would now be seriously embarrassed. In addition to the hydro-electric power that is generated at various plants, the steam plants of the Alabama Power Co. are able to provide a total additional service of 90,000 horsepower. Permission has been asked of the War Department for the use of the steam power plant built by the Government at Sheffield, which is of 90,000 capacity and which is at present not in operation. Should the Sheffield plant be brought into commission, the Alabama Power Co. will thus have 180,000 horsepower capacity, generated by steam plants. The Secretary of War has been urged by the public service commissions of several Southern states to favorably consider arrangements by which the Sheffield plant can be operated at once to serve an urgent public necessity. Without the Sheffield plant it is feared that not all the present service can be long maintained.

THE RAILROAD STRIKE COMPROMISE A MISTAKE.

THE railroad strike is over for the time being, but once more the nation has made a compromise which, while less disgraceful than the surrender in the Adamson bill, will simply serve to encourage the railroad labor union men to believe that in one way or another they can ultimately dominate the situation.

This country wanted to see the matter threshed out to a final round. It was prepared to meet the threat of the railroad brotherhoods. Temporarily things may be bettered by the compromise forced upon the country by the War Labor Board, but the compromise will only serve to do harm ultimately rather than good.

There was never a time when the country could have better afforded to let the railroad men strike, and strike to their heart's content; and then the question would have been settled to the everlasting good of the whole country and of all classes, by showing that no one class in this country can year after year threaten to starve the rest of the country into submission.

In helping to bring about this compromise, which it is reported President Harding succeeded in doing through the War Labor Board, we think he has merely delayed a vital question which needed an immediate, emphatic answer. If President Harding had simply said that law and order shall be preserved in this country, that men who want to operate the railroads shall not be interfered with by lawless attacks upon the roads or upon the men connected therewith, we would have had no strike of any importance. The country would have asserted its supreme power over the forces of disorganization represented in this case by the railroad labor men.

Railroad rates must come down. That is absolutely inevitable. But unless the railroads are given the power to control their employees and to make their rate of wages fit the present conditions and the lower freight and passenger rates that must be given to the country, they will encounter great difficulties in carrying out a lowering of rates. We believe that the rates must be lowered, even without regard to a halting in the reduction of wages by the action of the War Labor Board; but we also believe that a vast betterment of the whole situation could have been brought about if the Labor Board and the Administration had kept hands off and permitted this question to be settled on its merits as an issue between the railroad employees and the more than 100,000,000 people whom they desired to starve into submission.

Every day of good road building and the development of the motor truck which passes is, however, driving a nail in the coffin of the power of railroad brotherhoods.

PRESIDENT HARDING SPOKE WISELY ON RACE QUESTION.

FROM the moment when Senator Underwood introduced President Harding to the students of the University of Virginia as "the greatest man in America," to his return to Washington from his trip to the South, President Harding sounded a wise note. His emphatic stand against social equality of the races was a word which needed to be spoken by a Republican President. Other Republican Presidents, as we know, felt the same way but none of them had the courage of his convictions to make the statement in a public address for fear that this might lessen the negro vote in the debatable border states. Ignoring this, President Harding stepped up to higher ground and made a speech which for all time to come must be of tremendous value to the South, to the country at large and indeed to the world. The negro must be given every legal right but the negro can never attain social equality. This point was so emphatically stressed by President Harding that he has rendered a great service to mankind. It is a speech which from a politician or officeholder required great moral courage and backbone. It is a speech which, as we have said, many other Republican Presidents have wanted to make but none of them dared to do.

A STRANGE FINANCIAL ADMISSION

THE First Federal Foreign Banking Association of New York in its Bulletin No. 13, issued on September 30th, in reviewing the question of money and credit, says: "The stranglehold that gold has come from the fact that it has the monopoly of world-wide command-of-purchase at unquestioned parity."

The Century dictionary defines "strangle" as, "to draw tight, squeeze, to choke by compression of the windpipe, kill by choking, throttle."

Who would ever have imagined that a great banking institution of New York would thus refer to gold as having a strangle-hold?

Further on in the same financial circular it is said "there is not gold enough in the world to make current settlements with. If the realization that something must be done promptly isn't vivid now, it certainly will be very soon."

We have tried for several years to warn the financiers of the world that with a steadily decreasing gold output and a larger consumption of gold for the arts, the world is facing a gold shortage, which unless there is a change by some better system of financing, will ultimately lead to world-wide panic, and world-wide repudiation of debts and bonds, national and corporate. Gold as it now stands limited to an output with a steadily decreasing supply indeed has, as stated by the First Federal Foreign Banking Association of New York, "a strangle-hold," and this strangle-hold unless it is released, will ultimately produce the very things defined by the Century dictionary, "to draw tight, squeeze, to choke by compression of the windpipe, kill by choking, throttle."

ENORMOUS INCREASE IN EXPORTS OF FOODSTUFFS.

FOR the first nine months of 1921 this country exported 25,959,280,000 pounds of principal foodstuffs, or nearly three times the quantity exported for the same period of the pre-war five-year average of 1910-1914. Our exports of foodstuffs so far this year are over 7,143,000,000 pounds more than the 18,816,212,000 pounds of similar food products

exported during the same period last year. These figures have been compiled from the latest reports issued by the Bureau of Foreign and Domestic Commerce and they emphasize as nothing else can the enormous amount of foodstuffs this country is supplying abroad. We have shipped away over 12,980,000 tons, or about 640,000 car loads of foodstuffs listed in the accompanying table since January 1.

Our exports of wheat alone up to October 1 were 295,872,000 bushels compared with 203,421,000 bushels for the same period last year, and 84,348,000 bushels for the five-year average of 1910-1914. Corn exports increased from an average of 33,400,000 bushels in 1910-1914 and 13,082,000 bushels in 1920 to 107,532,000 bushels this year. The MANUFACTURERS RECORD in previous issues called attention to the likelihood of a scarcity of wheat with high prices in this country because we have already shipped in less than four months more than our estimated surplus for this purpose for 12 months and with the great increase in exports of general foodstuffs it is certain that a higher level of prices for all foodstuffs should prevail in the coming months, if based on the law of supply and demand. Only a fearful mismanagement of our financial system can keep the farmers from getting higher prices.

Following are the exports of foodstuffs for the first nine months of 1920 and 1921 and averages for the same periods from 1910 to 1914:

Comparison of domestic exports for the first nine months of 1920 and 1921.

	Average, 1910-1914.	1920.	1921.
Breadstuffs:			
Wheat bu.	84,348,181	203,421,978	295,872,930
Corn do.	33,402,100	13,082,511	107,532,998
Rye do.	970,581	45,827,230	25,478,837
Rice lbs.	28,914,412	204,114,295	489,439,850
Barley bu.	6,017,704	11,196,858	20,410,876
All other lbs.	* 469,347,369	446,612,740	† 220,432,831
Total lbs.	7,767,876,569	16,782,430,795	23,774,223,688
Meat products:			
Lard lbs.	387,683,413	429,944,884	716,173,848
Bacon do.	136,117,911	460,161,522	354,746,660
Hams and Shoulders do.	128,281,679	150,769,259	187,948,909
All other (a) do.	226,623,516	312,288,380	331,053,256
Total do.	878,706,519	1,353,164,045	1,589,922,673
Vegetable oils:			
Cottonseed do.	179,408,921	113,011,304	220,275,089
Foreign oils do.	(b) 19,239,891	(c) 65,629,306	(d) 17,487,708
Total do.	198,648,812	178,640,610	237,762,797
Dairy products:			
Condensed milk . do.	13,143,658	356,634,949	224,296,705
Butter do.	3,321,488	16,292,967	6,636,749
Cheese do.	3,852,158	14,037,251	10,437,719
Total do.	20,317,304	386,975,167	241,371,173
Dried fruit:			
Apples do.	14,578,838	5,437,194	14,802,611
Apricots do.	12,530,095	8,421,221	17,784,882
Raisins do.	8,194,108	33,562,936	10,680,200
Peaches do.	3,456,093	6,825,976	4,188,603
Prunes do.	23,137,636	60,754,789	68,544,318
All other (e) do.			
Total do.	61,896,770	115,002,116	116,000,614
Canned goods:			
Fruit do.	\$2,257,892	\$16,756,513	\$9,329,185
Fish do.	2,089,409	14,718,967	5,331,125
Vegetables do.	1,002,311	4,801,598	2,471,153
Total do.	5,349,612	36,257,084	17,131,463

* Preparations of oats and "all other," shown in value only, calculated at 10 cents per pound.

† Does not include "all other cereal preparations" and "all other breadstuffs," shown in value only.

(a) Includes pork and beef, canned, fresh, and pickled; oleo oil, tallow, mutton, sausage and casings, oleo stearin, and "all other" calculated at 20 cents per pound.

(b) Includes corn oil and "all other" calculated at 5 cents per pound.

(c) Includes corn, peanut, soy bean, and "all other" calculated at 10 cents per pound.

(d) Includes cocoa butter, corn oil, peanut oil, soy-bean oil, coconut oil, and "all other."

(e) Shown in value only.

Prospect of Lower Money Ahead of Us in England and United States.

FORCED by the inevitable realization of the fact that high money rates were more damaging to the welfare of the country than high freight rates; forced, we believe, also to a realization of the fact that drastic deflation had proven an immeasurable curse to this country and to the world, the Government is moving toward lower money rates.

The new Treasury certificates to be issued at 4¼ per cent are indicative of the fact, we believe, that even the Treasury Department probably now accepts the truth that high money rates are destructive of business and low rates an encouragement to business. We believe that the plans are being made for a gradual decrease of money rates and some inflation of credit in order to start the wheels of industry once more to moving and that the issue of Government certificates at 4¼ per cent is the first open acknowledgment by the Treasury Department of the change which is ahead of us.

A dispatch from London to Barron's Financial Weekly shows that the foremost people of England are realizing the fearful harm done by too much deflation. The dispatch says:

"British bankers are all alert. Mr. Lloyd George is about to interfere in finance. He is veering around in favor of inflation. He admitted this in his latest speech at Inverness. 'There are many able men,' he said, 'who believe that we have gone too far in Britain and America in the matter of deflation.'"

Referring to the visit of Mr. Reginald McKenna, now in this country, the dispatch adds:

"Five days after this dispatch Mr. Reginald McKenna sailed for New York. As to his mission no one knows. He refused to make any statement, but all bankers agree that his mission is one of supreme importance to both countries. Mr. McKenna is a militant banker. He is aggressive in protecting the rights of capital. He is the head of the great Midland Bank, which holds more than \$1,500,000,000 in deposits, and has 1500 branches throughout England. He is the only British banker who has been a Cabinet minister. He was Chancellor of the Exchequer under Asquith. He succeeded Sir Edward Holden, who was for years the J. P. Morgan of Great Britain. * * * In fact, Mr. McKenna is the most important Englishman who has visited America since the war. He is the official, responsible representative of British finance. * * * Mr. McKenna was the first British banker to become militant. He directly attacked the Government policy of high taxation and restriction of credit. Other bankers have now followed suit. Notably Mr. Walter Leaf of the London County and Westminster Bank, and Sir Richard Vassar-Smith of Lloyds."

In closing the correspondent adds:

"Happily there is also a greater willingness on the part of the bankers to do battle on behalf of the people."

The time has come for a battle of that kind in the United States. The admission of Lloyd George that deflation has gone too far, and the same position taken by Mr. McKenna and other bankers of London, only helps to prove the truth of every statement the MANUFACTURERS RECORD has made for the last three years against the unwisdom of the deflation campaign carried on by the Federal Reserve Board.

Barclays Bank of London, one of the great financial institutions of Europe carrying deposits of over one and a half billion dollars, seems willing to admit that there can be some good in inflation rather than in drastic deflation. In its October circular letter Barclays Bank says:

"Under existing conditions, it appears inevitable that some inflation must, in any case, result from the increasing requirements of the Government. If such inflation provides the stimulant needed to set the wheels of trade moving once more, it may even be beneficial, but the test of this will be, not the accumulation of paper profits, but the increase in real production, at least in the same ratio as increasing credit.

It seems hardly necessary to suggest that the stimulant needed throughout the world to start the wheels of trade is a little inflation and that this inflation would inevitably, as it always has done, increase production. During the inflation period following the Armistice, every manufacturing enterprise in the United States and Great Britain alike was crowded to the limit of its capacity. The whole world was eagerly increasing its output and this output was rapidly going into consumption. Even Governor Harding of the Federal Reserve Board stated that the demand was exceeding the productive power of the country by reason of the great buying power of well-employed labor, but a certain element in the banking world concluded that there was too much prosperity, too much business and they both must be broken down, a breaking down process that pretty well bankrupted the universe. It was one of the greatest blunders ever committed in the financial history of the world, indeed we are inclined to say, one of the greatest acts of criminality in finance in the history of the world in so far as it was definitely planned by certain interests, even though their profound ignorance of finance may have kept them from comprehending the inevitable results of their work.

TWO GOOD THINGS.

MR. C. C. HOUSTON of Houston & Liggett, hardwood exporters, Lewisburg, Tenn., in renewing their subscription, says:

"We are pleased to hand you herewith check for \$6.50, being our subscription for another year, which we pay with as much pleasure as (second to) our pastor's salary, as we feel that we get value received in each issue."

We are glad to have the MANUFACTURERS RECORD placed in juxtaposition as to the payment of the pastor's salary, for if there is any contribution which every Christian ought to joyfully make it is the payment of a salary to his pastor; and that salary ought to be for all pastors somewhat more commensurate with the value of their work than it has ever been in the past.

The MANUFACTURERS RECORD counts it an honor to be accorded second position in the estimation of this subscriber to that of the payment of his pastor's salary, for the minister of the Gospel is doing the highest work on earth. He is striving to lift humanity to a higher plane, and to fit men for better lives here and for the eternal life beyond the grave. If we can stand in the estimation of our subscribers next in line to the work of the minister of the Gospel we can ask for no higher honor.

A FALSE BANKING POLICY.

A BUSINESS man in Beckley, W. Va., sends us a copy of a letter which he says is being sent out by the banks of Raleigh county of that State, calling upon borrowers to pay up their accounts. This letter, he says, is going even to borrowers who have in some instances Liberty bonds up for collateral, and he adds he "cannot understand why the banks do not rediscount with the Federal Reserve banks and endeavor to tide over this situation, without driving people to withdraw what little active money they have from general circulation, especially towards the lines of endeavor, so that labor may be employed."

The letter which he writes as being sent out by the banks of Raleigh county is as follows:

"We are sending out this general letter to our best friends among our borrowers and customers along with a notice of a maturing note, to request you if at all convenient to make some payment on your note at this maturity.

"You are aware of the scarcity of money and in trying to take care of the numerous urgent demands we have extended loans to our limit, besides we feel that there will likely be a continuance of the depression for some months, therefore, as business men and as guardian of peoples moneys, we prefer to take the conservative course and reduce our bills receivable extensively, besides we feel that this is a period of retrenchment and from a good business standpoint every one should use all of their available funds in reducing their obligations rather than to make further investments, until a period of normalcy is reached and business generally picks up again.

"We trust that you will appreciate our attitude and that you will respond as liberally as possible and if at all convenient we will be very glad if you can meet the entirety of this note. Be assured, however, that we want to go to the limit in assisting our good friends and customers at the same time we expect their good co-operation."

It is needless to say that there is no more certain way of preventing the revival of business, of lessening unemployment, and of creating hostility to the entire banking system of the county than a policy such as is here outlined by the banks of Raleigh county, W. Va.

It is not true that every one "should use all of their available funds in reducing their obligations rather than to make further investments," for if this were done the period "of normalcy and improvement in business," to which these bankers refer, would never come. There are many cases in which available funds should be used for betterments and improvements of one kind and another, and in this way help on business; but the banker who takes the narrow-minded point of view as outlined in this letter, is doing his utmost to delay a revival of business, and to intensify unemployment and the bolshevistic spirit of the day.

ILLITERACY SLOWLY DECLINING.

A PRELIMINARY statement issued through the Census Bureau states that 2 per cent of the native white population ten years of age and older in 1920 were illiterate, as against 13.1 per cent of the foreign born white population and 22.9 per cent of the negro population.

The illiterate white population in 1920 numbered 1,242,572. The percentage illiterate for this class declined from 8.7 in 1880 to 6.2 in 1890, 4.6 in 1900, 3 in 1910 and 2 in 1920.

The illiterate foreign-born white population in 1920 numbered 1,763,740 and formed 13.1 per cent of the total foreign-born white population ten years of age and over, as against 12.7 per cent in 1920, 12.9 in 1900 and 13.1 in 1890.

The illiterate negroes in 1920 were 1,842,161 in number and represented 22.9 per cent of the total negro population ten years of age and over, as compared with 30.4 per cent in 1910, 44.5 in 1900, and 57.1 in 1890.

The largest percentage of illiteracy in the native white

population shown for any state, 11.6, is that for New Mexico; and the smallest percentage, three-tenths of 1 per cent, appears for five states—Montana, Idaho, Wyoming, Utah and Washington, and for the District of Columbia. For the foreign-born white population, the largest illiterate percentage, 33.8, is that for Texas, and the smallest, 4.7 for South Dakota and Washington. For the negro population the percentage illiterate ranged from 38.5 in Louisiana to 2.9 per cent in New York.

THE RIGHT RING FOR AN AMERICAN.

CONTINUING its career of blundering and interference, the superserviceable Southern Commercial Congress has appointed Herman A. Metz general chairman of its National Cooperating Committee. Clarence J. Owens, Executive Director, states that the committee is organizing for "intensive practical service." Just how practical and of what service such a committee of such an organization can expect to be is difficult of understanding. Dr. Charles J. Herty of New York, the well known ex-president of the American Chemical Society and editor of the Journal of Industrial & Chemical Engineering, minces no words in expressing his disapproval of such a course. He declines a proffered membership in a committee presided over by Metz, and in transmitting his refusal to Dr. Owens he writes:

"For the past several years Americans engaged in trying to secure from the Congress effective legislation to protect and develop American industries, especially the organic chemical industries, have been openly and persistently opposed in their efforts by Mr. Metz, whose interest in the importation of foreign products is well known to all. I cannot consider Mr. Metz as a worthy type of a man to serve as chairman of the National Cooperating Committee of the Southern Commercial Congress."

Good for Dr. Herty! Would that all others had equal backbone and good sense.

A FARMER'S LAMENT ABOUT LABOR.

IN discussing the unemployment situation, the owner of a large farm about twenty miles out of Baltimore said: "Yes, I have needed for several weeks, and can use now, from six to a dozen extra men a day to get in the crops. I know men are looking for jobs everywhere, but my experience is that they don't want to do any real work. I have secured from employment agencies and elsewhere dozens of men. I have taken them in my car out to my place and after a few hours of farm work they throw up their jobs and quit cold. This is no exaggeration.

"Before they are hired they say they can do anything and know all about farm work, when as a matter of fact they are as ignorant of farm work as they are unfamiliar with real, hard labor. Why, the other day we were cutting corn and when it came time to load it on the wagons one of the corn cutters was told to help load. With great indignation he replied 'I was hired to cut corn, not to load it on a wagon,' and quit on the spot. Can you beat it!

"I don't say that all men out of employment are of this class, but can you blame me for being unsympathetic and a little disgusted when I hear of the millions out of work? Farm work requires a man of all-round ability and one that is able and not afraid of work, but out of the last fifty I have employed only a small number have shown the slightest knowledge of farm work or stayed on the job longer than a couple of days, while only one or two have stuck until pay day and showed up for work the day after."

THE CHEMICAL SOCIETY'S SOUTHERN MEETING.

THE suggestion made in the MANUFACTURERS RECORD a few weeks ago that the proposed meeting in Birmingham of the American Chemical Society should be made the occasion for giving the members of that great organization the opportunity of studying the chemical resources and potentialities of the South, has attracted great attention in the South as well as among the members of the Chemical Society. Southern papers have heartily endorsed the position of the MANUFACTURERS RECORD in urging that this meeting in Birmingham should be given the attention which its great importance deserves.

A suggestion from the leading chemists to the MANUFACTURERS RECORD is to the effect that the trip from Washington to Birmingham should be made with stop-overs at Johnson City, Kingsport, Dante, Erwin, Mascot, Knoxville, Ducktown, Alcoa and Cheoa, and likewise that this trip shall include, if possible, a visit to the nitrate plant at Muscle Shoals and to the plants of the Aluminum Company of America, one located in North Carolina and one at Maryville, Tennessee.

It will be especially desirable for the members of this great organization who have such a dominating power in guiding the thought and the development of the nation that they should see not only the places mentioned and pre-eminently the Muscle Shoals section, but that they should also have the opportunity of studying the vast gas and oil and sulphur and salt regions of the farther South.

In urging the importance of this proposed meeting, the editor of the MANUFACTURERS RECORD recently wrote to one of the officials of the organization as follows:

"The proposed meeting of the Chemical Society in Birmingham next year offers an opportunity of very great value to the members of the Society and to the country at large.

"It is now generally recognized that the South is the greatest undeveloped asset of the nation, and that anything which makes for Southern development makes for national progress and the rounding out of national life. Never was there a truer saying than that of Hon. Wm. D. Kelly, then known as 'The Father of the House of Representatives' and sometime known as 'Pig Iron' Kelly by reason of his devotion for a tariff on pig iron, who in writing to me about 1884 from the South said: 'The development of the South means the enrichment of the nation.'

"Judge Kelly appealed to the nation to take part in Southern development. His idea was not simply the value to the material interests, but the broad value in rounding out national life.

"The resources of the South for industrial development are most incomprehensible. No one except those who make a careful study for themselves will ever believe one-half that other experts or scientists write about the South. You must see for yourself if you would measure the limitless potentialities for the development of industries and agriculture through chemistry if you would adequately comprehend what the utilization of these Southern resources mean for national advancement and national safety if we should ever again be engaged in a great war contest.

"Let me, therefore, urge that an effort be made to induce the American Chemical Society to plan that during its trip South it make a careful study of some of the regions where industrial and chemical potentialities can be best and most quickly realized. Let them take in, for instance, a part of the great Appalachian region, with mountains bursting with mineral wealth, and with many rivers which now run idly to the sea, yet to be utilized for vast hydro-electric power. Let them see not merely the coal and the iron of Birmingham, but let them study the possibilities in cotton, and cottonseed oil, in lumber, in the vast supply of natural gas, in oil, in boundless deposits of salt, in the sulphur fields which furnish three-fourths of the world's sulphur; and as they study for themselves and on the ground some of these resources, their vision of the future of America will necessarily be broadened. . . .

"That is the spirit in which I would take the liberty of suggesting that members of the Chemical Society go South,

and make their plans not merely for the meeting in Birmingham, but to stop by the wayside perhaps in the Appalachian region here and there on the way down, and then with side trips from Birmingham, and with a home trip through the Piedmont or the coast region, get a better knowledge of the foundation on which the South is building, and what it offers to the chemist and the industrial worker everywhere as a field unmatched on earth for future operations in the creation of wealth and the creation of employment of the skilled and the unskilled man, and then realize, as they will, that every acre of land made more profitable by better cultivation and higher fertilization, every ton of coal utilized more fully than in the past, every economy in iron and steel production, the utilization of every other raw material in the South, adds to the rounding out of the nation's life and the nation's patriotism."

THE STUPENDOUS EXTENT OF THE NATION'S MANUFACTURING DEVELOPMENT.

PRELIMINARY figures of the 1920 census of manufactures show that the United States in 1919 had \$44,678,911,000 invested in manufacturing enterprises having a capital of over \$500, but excluding hand and building trades and neighborhood industries. The value of the country's manufactured products for the same year reached \$62,910,202,000. Compare these enormous sums with the country's manufacturing capital in 1910 of \$18,428,000,000 with manufactured products of \$20,672,000,000; with \$8,978,800,000 capital in 1900 with products valued at \$11,411,100, and a capitalization of \$2,790,000,000 with products valued at \$5,369,500,000 in 1880, and some idea can be gained of the rapidity and magnitude of the industrial advancement of the United States in forty years.

MANUFACTURING INDUSTRIES—1919.

State	Number of establishments	Wage Earners (Average number)	Capital	Value of Products
Alabama	3,654	107,200	\$452,912,000	\$492,731,000
Arizona	480	8,500	101,486,000	120,769,000
Arkansas	3,123	50,000	138,818,000	200,313,000
California	11,943	243,800	1,333,382,000	1,981,410,000
Colorado	2,631	35,300	243,827,000	275,622,000
Connecticut	4,877	293,200	1,343,544,000	1,394,898,000
Delaware	668	29,000	148,208,000	165,073,000
District of Columbia	595	10,500	63,008,000	68,826,000
Florida	2,582	74,400	206,294,000	213,327,000
Georgia	4,803	123,500	448,932,000	693,556,000
Idaho	922	13,900	96,062,000	80,511,000
Illinois	18,596	653,900	3,513,700,000	5,874,007,000
Indiana	7,918	277,600	1,335,851,000	1,901,846,000
Iowa	5,683	80,500	403,206,000	745,473,000
Kansas	3,474	61,000	357,597,000	913,667,000
Kentucky	3,957	69,300	276,535,000	395,660,000
Louisiana	2,617	98,300	462,209,000	676,190,000
Maine	2,995	88,700	419,158,000	456,822,000
Maryland	4,937	140,400	619,007,000	873,945,000
Massachusetts	11,904	173,600	2,964,177,000	4,007,452,000
Michigan	8,304	470,800	2,337,003,000	3,447,984,000
Minnesota	6,225	115,600	690,387,000	1,218,130,000
Mississippi	2,455	57,600	154,117,000	197,747,000
Missouri	8,593	195,900	939,691,000	1,599,264,000
Montana	1,290	17,200	137,476,000	166,664,000
Nebraska	2,884	36,500	245,257,000	596,042,000
Nevada	166	3,100	16,835,000	22,874,000
New Hampshire	1,499	83,100	329,167,000	407,205,000
New Jersey	11,062	509,200	2,835,441,000	3,686,775,000
New Mexico	387	5,700	15,226,000	17,857,000
New York	49,374	1,229,900	6,033,832,000	8,875,007,000
North Carolina	5,989	157,700	669,144,000	943,808,000
North Dakota	404	4,500	24,550,000	57,574,000
Ohio	16,125	730,700	3,810,832,000	5,109,219,000
Oklahoma	2,445	29,500	277,034,000	401,363,000
Oregon	2,707	58,600	237,255,000	368,783,000
Pennsylvania	27,977	1,137,100	6,227,268,000	7,312,333,000
Rhode Island	2,466	139,700	594,337,000	747,323,000
South Carolina	2,004	79,400	374,538,000	381,454,000
South Dakota	1,414	6,400	30,933,000	62,171,000
Tennessee	4,589	95,200	410,203,000	556,253,000
Texas	5,724	107,700	588,797,000	999,996,000
Utah	1,160	18,900	140,785,000	156,933,000
Vermont	1,790	33,500	134,314,000	168,108,000
Virginia	5,603	119,400	464,517,000	641,810,000
Washington	4,918	132,900	574,285,000	809,625,000
West Virginia	2,785	83,000	339,190,000	471,871,000
Wisconsin	10,394	285,200	1,372,723,000	1,883,608,000
Wyoming	576	6,600	82,288,000	81,445,000
United States ..	289,768	9,103,200	\$44,678,911,000	\$62,910,202,000

ENGLISH ADVICE TO ENGLISH BUSINESS MEN.

THE mistake of the English steel men in appearing before a Congressional committee to protest against our proposed tariff bill was fully recognized in a recent editorial by the Montreal Star, one of the leading papers of Canada, and commenting on the Star's position the Yorkshire (England) Post fully approves the advice given by the Star to English manufacturers against the unwise action of Sheffield steel manufacturers. The Yorkshire Post commenting on this situation said:

"The Star's sharp criticism, while not very gratifying to English pride is worth the attention of British interests. The whole circumstances are so out of the ordinary that they should be carefully considered before the new precedent set up by the Sheffield steel manufacturers is followed by any other British industry."

It records the Star's blunt characterization of the depuration as a policy of crawl which can only arouse the contempt of American business men. Quoting the Star editorial it says:

"This is a hard-headed view, cold as may be its comfort to Sheffield. Canadians themselves are also suffering from the American prohibitive tariff policy and this Canadian journal grimly advises that the only thing to do is for both countries to take the new tariff with a stiff upper lip and do what they think will best protect their own trade against its effects. The tariff is not a blow at either country, it is pro-American, not anti-anybody."

"This advice is certainly sound and business men must find other means than appeals to foreign sympathy in order to preserve their trade. If one market is impregnably closed the only hope is to open another, but whether this is practicable or not, the old market will not be maintained except for its own profit."

We are very glad to see that two strong papers such as the Montreal Star and Yorkshire Post thus expressed their opinion upon the tactical blunder made by the Sheffield steel men in appearing before a committee of the United States Congress to undertake to say what should or should not be our tariff policy. Nothing could more quickly cause resentment in this country even among rank free traders than any effort on the part of foreigners to tell us what legislation we should or should not enact. We have the most outrageous work of this kind going on by pro-German agents, but we trust that no more English people will follow their activities.

It would very justly be regarded as a piece of great impertinence if American manufacturers should undertake to appear before Parliament and tell the British Government in this direct way what American business men demanded, or requested even, in its legislative work.

The security of good relationship between England and America could not more quickly be endangered than by any further action such as that of the Sheffield steel people.

SUBSCRIPTION PRICE TOO SMALL IS THIS SUBSCRIBER'S VIEW.

Dixie Consolidated Graphite Company.

Birmingham, Ala., September 23.

Editor Manufacturers Record:

The company receives your publication regularly and the writer would, personally, rather have your MANUFACTURERS RECORD on his desk than all the newspapers in the country. My personal opinion is that the MANUFACTURERS RECORD cannot be bought and the mere charge made for its distribution is so small I cannot see how you do it. I dare say there is not another publication in the United States today that stands as fearless as you do. I look forward to the coming of the RECORD with my fondest anticipations of true news, and my only regret is that it is not published more often.

HARRY KERLIN, Treasurer.

Views of Some of Our Readers.

Upward Trend in Prices Essential to Prosperity.

J. F. Worsley, Ltd.,

Railway Contractors-Logging Equipment

Atlanta, Ga., October 6, 1921.

Editor Manufacturers Record:

The writer has just read your open letter to Hon. A. W. Mellon, and I wish to congratulate you on such a splendid epistle, which simply bristles with facts, and which if heeded would mean a return of employment and an end of suffering to thousands in our country.

Take the lumber industry for example. There is now a housing shortage over the entire country. Even under present conditions it is impossible to get a house in any of our large cities; yet mill after mill throughout the entire South and West has closed down, their employees are idle, and lumber on their yards, manufactured under their old costs, is being sold too cheaply when it is sold, and as business men they cannot afford to run their plants and face further losses.

It is sincerely to be hoped that the rise in price of cotton will cause an upward trend in the prices of other materials, for unless there is an improvement in conditions the worst is yet to come.

Again thanking you for having written and published your letter, and with best wishes to you and to the RECORD, I remain, etc.

J. F. WORSLEY.

How the Retailer Has Been Hit.

The Baskin Shoe Co.

Anderson, S. C., October 5, 1921.

Editor Manufacturers Record:

I herewith enclose check for the RECORD. Pardon my delay, but it is useless to tell you how we have been handicapped.

I heartily endorse your good work. The banks and our daily newspapers are responsible for our poverty. Our papers here as well as all over this country ask the retail merchants to buy advertising space at 30c per inch and then in the same issue that the ad appears spread the propaganda of high prices that the retailer charges for his merchandise in order to get his circulation to continue in the rural sections.

It is a God's pity that Richard H. Edmonds could not edit all the newspapers that reach the Good Old South; then we would not have to stand for our bankers saying, "We just cannot, that's all."

The retail merchants of the South have lost more in the past 18 months than they made in the three years previous to the great scandal of the Federal Banks; but here's hoping that the light that is now apparent will ever shine and shine in a way that our people will have more confidence in God and in the good old U. S. A.

THOS. P. BASKIN.

Exponent of Americanism.

A. B. Spencer Lumber Co.,

Wholesale Lumber & Shingles.

San Antonio, Tex., October 4, 1921.

Editor Manufacturers Record:

I enclose herewith check for \$6.50 renewal subscription to the MANUFACTURERS RECORD. I cannot get along without the RECORD. One thing I like about the RECORD particularly is, the slogan—"EXPONENT OF AMERICA" which you print at the top of the front cover of each issue.

HERBERT SPENCER.

Heavy Exports of English Textile Machinery.

Manchester, October 10—[Special.]—The official statistics of the exports of textile machinery from the United Kingdom confirms the reports of the busy times which Lancashire makers are experiencing. The shipments for the month of September amounted to 12,019 tons compared with 4,055 tons last year and 13,687 tons in 1913. During the nine months ended September last, 111,637 tons were sent abroad against 35,816 tons for the same period of 1920 and 130,525 tons in 1913.

So far this year compared with last increased quantities have been taken by the following countries: India 32,999 tons, Japan 11,300 tons, China 9,853 tons, France 6,441 tons, United States of America 3,491 tons and South America 3,176 tons.

American Society for Municipal Improvements Meets in Baltimore.

LARGE ATTENDANCE OF ENGINEERS AND PUBLIC OFFICIALS FROM MANY CITIES OF THE COUNTRY—COOPERATIVE CONFERENCE OF MAYORS INAUGURATED.

The twenty-seventh annual convention of the American Society for Municipal Improvements held in Baltimore at the Southern Hotel last week from October 25 to 28 was the largest and in many respects the most important gathering which this organization has held. The delegates came from all parts of this country and from Canada, the total registrations being over 500.

Perhaps the outstanding feature of the meeting was the conference of mayors, which was called by Mayor Wm. F. Broening, of Baltimore, for the purpose of discussing civic problems in conjunction with the meeting of the Society. So successful was this conference that committees were appointed by both the Mayors' Conference and the Society to cooperate in establishing a permanent organization and arrange for holding annual Mayors' Conferences at the same times the annual conventions of the American Society for Municipal Improvements are held. It was felt that this co-operation between municipal executives and the engineers charged with carrying out municipal improvements would tend to greatly enhance all city work and accomplish much quicker and better results.

The holding of the exhibits in the main convention hall was an innovation at this meeting and received much favorable comment. Not only did this give an impressive setting to the convention hall, but it brought into close contact the attending delegates and the progressive manufacturers who had brought their samples, models and catalogs here to explain them and show their various advantages.

All together there were thirty-five exhibitors, and in addition to those who obtained space in the main hall a number of others had their displays in the corridor leading to the hall. Two large rooms on the floor below the convention hall were used by the city of Baltimore to display by photographs, drawings and maps the extensive improvements which the city has made since the great fire of 1904. Since that time over \$100,000,000 has been spent in Baltimore's improvements. The exhibit contained also plans showing arrangements that are now being made to expend \$102,000,000 in further improvements, especially those in the new annex of sixty square miles which was recently added to the city.

The men who attend these gatherings and present the many technical papers for consideration and discussion are engineers of recognized ability and high standing in their respective communities, active city officials, highway engineers, public works commissioners and others prominently identified with some phase of city building, municipal improvement or street and highway construction. Of particular value in these meetings are the reports of the eleven general committees and their 14 sub-committees, in bringing out difficult problems and getting the benefit on the floor of the convention of the discussions which follow the formal committee reports.

Most of these committees have directly to do with the perfection and adoption of standard specifications covering every phase of municipal work. These specifications are worked out in co-operation with committees from the American Society of Testing Materials, and the committees charge themselves each year with studying and improving the different specifications, with the idea of keeping them up to the latest methods used in each branch of municipal work. As a result, these standard specifications are accepted in every community of the land as representing the best

practices to follow. Serving on the respective committees are representative municipal officials and consulting engineers, so that each specification receives the careful scrutiny, study and advice of men who are thoroughly equipped by knowledge and experience to keep the specifications up to the latest ideas. The value of this cooperative effort was emphasized by the chairman of the Society, Col. R. Keith Compton of Baltimore, when he said in the course of his opening address:

"I am sure that all of you gentlemen will agree that the success of this Society depends largely on committee work. That work must be energetic, active, prompt and thorough. To secure the proper men for these committees and at the same time hold on each committee experienced men of a previous administration is an immense job." In addition to the general committees and sub-committees, there are 11 specifications committees and 3 special committees. To provide for a full personnel on these committees means approximately 150 appointments. The work of each convention is really performed by committees and all their reports are embodied in a volume which is published each year in order to have in permanent and accessible form the valuable data brought out at these meetings.

President Compton in his address told of the increase in the membership of the society, the total as of September 30 being 648, and pointed out the necessity for the increase made in annual dues. On the question of enlarging the scope of the society he said:

"It would appear that we should make ourselves better known to the public and this can only be done by advertising the work of the society, through team work on the part of the committees and up-to-date reports and publication of proceedings which can be used as a reference at any time."

In discussing the possible benefit and influence which the society could exercise at this time in connection with the unemployment situation, Col. Compton said:

"It is estimated that there are from 3,500,000 to 4,000,000 unemployed in this country alone. With the winter season approaching and with at least fifty per cent of our public works in localities where climatic conditions make it impossible to continue them, we must view the immediate situation with concern and alarm. There has been no organized effort on the part of the engineers of this country to promote construction activity, but it must be admitted that a revival of such activity would greatly assist in relieving the situation.

"We should not allow ourselves to be misled with the idea that the awarding of contracts this fall for work to be done next spring, or the execution of public works during the winter, even if climatic conditions are favorable, will entirely relieve the situation. In some localities, the excessive cost would make this procedure prohibitive. Then again, a contractor bidding on work late in the fall, with the prospect of his work being carried over until spring, will figure the cost of materials as they are at the time he files his bid. He has no assurance that materials will be lower in the spring. In localities, however, where mild winters prevail, contracts may be awarded and the work proceeded with during the winter months without serious interruption.

"It would appear that the better way to approach this subject would be to bring into consultation all concerned. the producer, the material man, the dealer, the contractor

and the engineer. It is up to the producer to figure his production with a reasonable profit. It is up to the dealer, the material man and the contractor to do the same and thereby come before the public with a reasonable proposition and relieve the already overburdened taxpayer, who, in some instances, is now paying for public works double what he paid prior to the war. No one would claim that we can or should go back to prices or conditions as they prevailed prior to the war; but we must approach the subject with the idea that we should and must go back to reasonable conditions. This can only be done by all interests working in harmony, with full co-operation and co-ordination.

"What is really needed is for the engineers, those who are responsible for the expenditure of public money on public works, to take the leadership in this matter, and it is generally conceded that the advice of the man who assumes this responsibility will be followed, provided he is intelligent, aggressive, forceful and public-spirited."

The program of the convention called for a large number of technical papers and addresses on the many phases of engineering and constructive features of municipal improvement. It is these papers and the floor discussion which follows that provide the constructive elements in the meetings and do so much to make the annual gatherings helpful to the delegates from the various cities of the country.

In the address of Dr. J. E. Greiner of Baltimore on "The Port and the Municipality" emphasis was laid on the vital relationship existing between the full development of a seaport city and the commerce and trade of the immediately contiguous territory. Dr. Greiner also pointed out that unification and co-ordination in a port were of no avail without unification and co-ordination in the affairs of the municipality. The question of what this country will ultimately do about building up and maintaining a merchant marine and the present day problems involved make the following remarks of Dr. Greiner on port development particularly timely:

"When we analyze the influences which make a port and a city going concerns we must get away from the idea that a port is simply a place where ships load and unload, and the municipality a place where people work and live. We should vision the port and the municipality, not as places, but the one as a mechanical organism functioning with the object of accomplishing the economical interchange of freight between the land and water carriers, and the other as a living organism functioning with the object of improving the public welfare. With such a conception before us we see on one side terminals, trains, ships, freight and on the other, city administration, business association, improvement societies and aspirations.

"So long as the main objective of the municipal organism is public welfare—prosperity, improvement, growth—one of the surest ways of accomplishing this objective in a seaport city is to produce the commerce which is to be handled by the port, but it should be remembered that the port mechanism through which this commerce must pass is a measure of the volume of the commerce, because no matter how much freight is produced, no matter how many carriers are available, no more freight can be transferred from the one to the other than can pass through the gateway of the port."

The greatest asset of any seaport city is its port said Dr. Greiner and cited as an illustration the great plant of the American Sugar Refinery now nearing completion on the south side of the inner harbor. "It is the largest sugar refinery in the world. That refinery would not have come to Baltimore if our port had not been ample; it would not have come here no matter how excellent the port facilities unless the city itself had been able to furnish it with the labor and the supplies which it requires. It would not have

come here even with all that the port and city could supply if it were not for the activities of our municipal organism which convinced the company that the port of Baltimore was the port which could best meet its requirements.

"For the port, that refinery means almost a ship load of sugar every day throughout the year with the ships' demands for shipchandlery and other supplies, work for stevedores and repair work for shipyards. For the city it means the investment of millions, the increasing of the taxable basis, the employment of labor not only in the erection of the building, in making supplies needed by the plant, but also in operation so long as the plant shall continue; it means business for the bankers, business for the railroads, 70 car loads per day which will take away the finished product, business for the manufacturers of supplies which the refinery will need from the local market and a demand upon manufacturers of all sorts of commodities for return cargoes for the ships that bring in the raw sugar. The ramifications of that one enterprise will reach throughout the city with its benefits.

"No municipality that wants to be considered alive or wants to prosper can afford to neglect its port. The port's development should be the first concern. We now realize this in Baltimore. We allowed things to drift for many years, and depended upon our natural advantages while rival ports were developing along modern lines. We have quit that policy and are now active in our preparations for most radical improvements.

"To my mind, there should be no ambition on the part of a seaport city to strive for great size in its port. Efficiency is the main thing and the efficiency of a port is not dependent upon great size. The port of New York, for instance, covers practically as much area as Hamburg, Rotterdam, London, Liverpool, Bremen and Antwerp combined, but each of these ports alone has handled almost as much commerce as New York ever did. It is efficiency and the resulting economy of operation which makes a great port and not size.

"In the proposed development of the Port of Baltimore, the commission which has been appointed to plan and direct this work is a constructive and not an operating force. The plan in course of preparation will be an outline of the improvements which will best serve the interests of the port and the municipality; a working scheme and a guide for each step of the performance in order that the completed whole, which may take years in the accomplishment, may be harmonious in the working of its individual parts.

"The problem involved is of a tripartite character, with its commercial, financial and engineering features intimately dependent upon each other. The commercial feature is embraced in convincing transportation, industrial and commercial interests that it will be more profitable to ship through Baltimore than through any other port. As for the financial feature, that has been solved. The City is authorized to sell stock for the purpose of carrying on the development. The engineering or construction feature comes within the authority of the Commission but its functioning is dependent upon both the financial and commercial features."

The city of Cleveland, Ohio was selected for the next convention.

Officers of the Society elected for the ensuing year are as follows: President, E. S. Rankin, Newark, N. J.; First Vice Pres., W. W. Horner, St. Louis, Mo.; Second Vice Pres., Ellis R. Dutton, Minneapolis, Minn.; Third Vice Pres.; H. H. Smith, New York City; Secretary Charles Carroll Brown, St. Petersburg, Fla.; Treas., Linn White, Chicago, Ill.

High Type of Suburban Development Carried Out at Charlotte.

MYERS PARK AN INSPIRATION TO THE CITIES OF THE SOUTH—ONE OF THE MOST SUPERB RESIDENTIAL DEVELOPMENTS IN THE UNITED STATES.

By E. S. DRAPER, Charlotte, N. C.

Myers Park, the premier suburban residential development of the State of North Carolina and widely known throughout the South stands today a successful monument to the breadth of vision of the original promoters and the men whose faith

enabled this project to be taken up. With its ever increasing community of beautiful homes it offers suburban opportunities to the city of Charlotte, which has been one of the biggest factors in the steady and consistent growth of the city. This sub-

this restricted suburban park subdivision has been completed to the extent to warrant its being considered as ranking in the first group of well known park subdivisions of the country. The MANUFACTURERS RECORD in its issue of July 4, 1912 carried a very complete article describing the places, features, and scope of the development. How well these projected plans therein described have been lived up to, can best be ascertained by a visit to the property. However, a description of the improvements and a statement of facts regarding improvements and property values will support the claim of Myers Park to being the finest unified suburban development south of Baltimore.

A few facts with regard to permanent improvements actually completed will give an idea of the size of the development. An electric car line with ornamental iron trolley poles extends within the Park area for a distance of 2.6 miles, 1.3 miles being double track, and with fifteen minute car service without transfer to the center and business district of the city. A total of 10.25 miles of paved streets, varying in width from 60-foot streets to 110-foot boulevards; of the latter there is a total distance in the park of 3.58 miles completely paved. Utilities completed within the development include a total of 7.67 miles of gas mains, 12.1 miles of



One of the many beautiful residences with grounds attractively landscaped.

urban development is a tremendous asset to Charlotte and is the mecca of tourists and visitors travelling in this section of the Carolinas. With its beautiful winding streets and boulevards, planted with large shade trees, many of which have been moved in from the country, its hundreds of handsome homes and with attractively landscaped grounds, its college, apartment houses, community store, parks and parkways, it provides for the best in home and community development and blazes the way for the many similar developments which have been and are to be undertaken in the Carolinas.

In the ten-year period since the development of Myers Park was first conceived and projected by George Stephens, president of the Stephens Company, developers and owners,



Trolley waiting stations as here shown are one of the features of the boulevard development at prominent corners.



A MINOR STREET, TREE SHADED AND BORDERED WITH HANDSOME RESIDENCES.

electric wires (all poles being on rear lines of property) 10.9 miles of sewer pipe, 7.8 miles of water pipe and of course a complete storm drainage system for all streets.

The first construction work on the property was started in August, 1911 and since that time not a month has passed without improvements and extensions being made.

The tract includes an area of 1,220 acres beginning at a point adjacent to the Presbyterian Hospital and a mile and a half from the city's center, extending southward for about two and three-fourths miles, having at the lower end a width of a little over a mile, and embracing the full width



Street scene where less than five years ago was a cotton patch.

of a ridge between Sugar and Briar creeks, the principal streams in the vicinity of Charlotte. This area is gently rolling, with perfect, natural drainage, forming the backbone of the entire property.

The lower and flatter areas along the streams have been given over to development as a continuous parkway, and the ridges running from the main divide toward the streams on either side offer a great variety of interesting scenery up, down, and across the valley, with one point in common so that each ridge seems to overlook all the others. A large portion of the property is in original forest.

In all, the natural features of the property lend themselves to the highest type of residential property development, and the plan has everywhere been made to develop to the very highest the topography of the country. Every building site over the great area has had thought given to bringing out its utmost possibilities.

The most successful example of big tree moving in the South is to be found in Myers Park where hundreds of trees, willow and water oak, elms and sycamores have been transplanted from outside of the park area to the parking strips of the streets with an unbelievably small percentage of loss. Opportunity has been given the lot owners to avail themselves of this and other landscape service at cost.

Architectural features of a civic nature are numerous. At one of the two main entrances, an attractive stone covered portal treatment for car line, street and sidewalk, well planted with shrubbery, was erected early in the development. The use of stone—native North Carolina granite—has been carried out in all the civic features. The waiting stations are of especially attractive design and located in park areas. The Community Store, also of stone, is located in the heart of the Park, yet close to the country roads to facilitate the delivery of country produce. Attractive developments within the park, set apart by virtue of topography or natural features, are further characterized by entrance treatments of stone. Queens College, a Presbyterian college for girls, has erected a collegiate group of six handsome buildings in brick and limestone on their 50-acre campus, with plans for considerable expansion in the near future. At the end of the car line a group of buildings formerly used as a military school have been remodelled and converted into apartments. Located in a country atmosphere yet within a short ride of the city, the apartments are unique in providing quiet surroundings and plenty of open space.

The landscape development of the Park has consistently followed the most approved methods and included features very modern in treatment. The minimum lot unit subdivided for sales purposes is one-half acre, with 100 foot frontage, so that as far as legal means can devise, assurance has been given that the development shall never be crowded or the standards of open housing reduced. The company was thought very daring, when they proposed a set of restrictions for the sale of lots, requiring a minimum cost of houses, minimum set-backs from the street and property line, specified locations for garages, outbuildings and gardens and other reasonable restrictions for securing permanence to the type of property development which the company was desirous of perpetuating and to provide security for the home owners. Now that results are apparent the criticism has changed to commendation and it is safe to say that after the example of Myers Park, no high class real estate development in the Carolinas will be placed on sale, without proper restrictions. The actual design of the layout of the property gives due recognition to the requirements of topography, building sites and the preservation of natural scenery.

The width of parking strip on each street provides ample room for planting the largest trees with heavy balls of earth and gives a restful effect in the street vista. The streets, curved in their adaption to the topography, with groups of shrubbery and evergreens, varying in foliage and flower, give an ever changing variety that causes Myers Park to be the motor playground of Charlotte. Trees have been conceded the right of way and many a road has been curved to avoid destroying a big oak. Land at street intersections is devoted



HERMITAGE ROAD AND A REPRESENTATIVE DEVELOPMENT OF HOMES.



A STREET INTERSECTION.

Note the curve of the streets fitted to the topography and the large native oaks which have been carefully preserved.

in many cases to attractive little parks and interior block playgrounds provide for recreation. Natural features such as ravines and borders of streams are reserved as parkways and planted for future development as a part of the park system of Charlotte. A nine-hole golf course is nearly completed, construction having been started about three years ago.

In the landscape development of the private home grounds, the utmost care has been taken not only in the beautification of the houses once completed, but in the proper location of the buildings, drives, walks and various areas. Almost without exception the home owners have availed themselves of the privilege extended by the Stephens Company in the matter of proper landscape plans and have availed themselves of the services of the landscape architect in development of the property. And it is the development, not of one place to the exclusion of others but of each tract of land, be it estate or small home grounds, in a manner to co-ordinate each and every place into a harmonious group that has brought forth the admiration of visitors and has made for a community spirit that can hardly be surpassed. Every home in Myers Park radiates a feeling of civic pride, of consideration for neighbors and fellow citizens, and of being an attractive part of the ensemble of beautiful scenery.

It has been said by qualified observers that there is being developed in Myers Park a style of landscape architecture typically American in open development and natural settings for the homes, and essentially Southern in provision for open spaces swept by the summer breezes and in masses of planting to offset the absence of the rich green lawns which are found in moist climates. There is no feeling of frigidity, of shut-in effects, in Myers Park homes. Although privacy is secured in the many attractive gardens, a feeling of the cordiality of the home and of the owner is expressed in the attractive landscape views to be seen from every street.

There have been a total of 163 homes ranging in value from eight thousand to one hundred and fifty thousand dollars constructed in Myers Park in the past nine years. The books of the Stephens Company show that a sum closely approximating \$600,000 has been spent on public development alone, while it is estimated that residences to the value of

four million dollars have been constructed to date in the park. The estate of J. B. Duke of New York City and Summerville, New Jersey, now under construction, is estimated to cost when completed a half a million dollars. As a taxable asset, Myers Park has been instrumental in making Mecklenburg County the richest county in North Carolina.

To dwell any further on the past, however interesting the actual accomplishments may be, would be to sacrifice opportunity for revealing future plans for development. For the past several years, companies have been operating on a large scale in building splendid houses for sale. The Myers Park Homes Company is announcing a building program of 50 houses per year, believing that the housing requirements of Charlotte for character homes will more than take care of their building program. In the past, houses have been sold from the plans before the frame work was completed, due of course in part to rising costs and actual need, but in a larger part to the attractiveness of setting and surroundings.

Even under the present adverse financial conditions, there are now under construction over twenty-five homes in Myers Park and as many more planned for early building.

A year ago, Myers Park found that in order to provide for community needs, fire stations, schools, etc., it would be necessary to incorporate as a city, and accordingly a charter was secured from the state legislature which would enable the community to provide for its future growth. A mayor and board of commissioners were elected who control the civic development of the greater portion of the community, which lies just outside of the Charlotte city limits.

The original design for Myers Park was developed by a northern city planner, John Nolen of Cambridge, Massachusetts, with Blair & Drane, Inc., Charlotte, North Carolina, engineers. E. S. Draper, landscape architect and city planner of Charlotte, N. C., who first came South to represent the designer, has had supervision of the public and private landscape work in Myers Park during the period of greatest development and activity and is now consulting landscape architect on both public and private work.

It is significant that the developers of Myers Park, the Stephens Company, have never been guided in their work by the prospects of immediate financial gain, and have worked

not for present profit, but for future gain, with a profound realization of their duty to posterity as builders of a city of homes; a community where the child would have opportunity for play, where the business man would find rest from arduous cares, and the old folks spend the sunset of life in peace and pleasant surroundings; in short, an ideal American residential community.

Manufactures in Georgia, Tennessee and Missouri.

A preliminary statement of the general results of the 1920 census of manufactures, covering the year 1919, for Georgia, Tennessee and Missouri, has been issued by the Census Bureau. The figures are preliminary and subject to such change and correction as may be found necessary from a further examination of the reports.

COMPARATIVE SUMMARY FOR THE STATE OF GEORGIA 1919 AND 1914:

	Census 1919	1914	Percent of increase, 1914-1919.
Number of establishments	4,803	4,639	3.5
Persons engaged in manufactures	141,080	118,565	19.0
Proprietors and firm members	4,777	4,443	7.5
Salaried employees	12,803	9,661	32.5
Wage earners (average number)	123,500	104,461	18.2
Primary horsepower	436,604	357,403	22.2
Capital	\$448,932,000	\$258,326,000	73.8
Services	127,565,000	49,950,000	155.4
Salaries	25,525,000	11,822,000	115.9
Wages	102,040,000	38,128,000	167.6
Materials	439,869,000	160,089,000	174.8
Value of products	693,556,000	253,271,000	173.8
Value added by manufacture (value of products less cost of materials)	253,687,000	93,182,000	172.2

COMPARATIVE SUMMARY FOR THE STATE OF TENNESSEE 1914 AND 1919:

	Census 1919	1914	Percent of increase, 1914-1919.
Number of establishments	4,589	4,775	-3.9
Persons engaged in manufactures	113,418	88,514	28.1
Proprietors and firm members	4,889	5,142	-4.9
Salaried employees	13,311	8,999	47.9
Wage earners (average number)	95,218	74,373	28.0
Primary horsepower	615,725	286,857	114.6
Capital	\$410,351,000	\$211,423,000	94.1
Services	106,690,000	44,912,000	137.6
Salaries	25,284,000	11,829,000	113.7
Wages	81,406,000	33,083,000	146.1
Materials	344,785,000	123,430,000	179.3
Value of products	556,271,000	212,071,000	162.3
Value added by manufacture (value of products less cost of materials)	211,486,000	88,641,000	138.6

COMPARATIVE SUMMARY FOR THE STATE OF MISSOURI 1919 AND 1914:

	Census 1919	1914	Percent of increase, /1 1914-1919.
Number of establishments	8,593	8,386	2.5
Persons engaged in manufactures	245,826	188,266	30.6
Proprietors and firm members	7,676	7,698	-0.3
Salaried employees	42,259	28,386	48.8
Wage earners (average number)	195,891	152,182	28.7
Primary horsepower	478,483	391,885	22.3
Capital	\$939,691,255	\$522,548,083	79.8
Services	276,868,822	126,494,933	118.5
Salaries	79,094,350	37,297,456	112.1
Wages	197,774,472	89,197,477	121.7
Materials	1,059,597,484	388,714,859	172.6
Value of products	1,599,313,923	637,952,128	150.7
Value added by manufacturer (value of products less cost of materials)	539,716,439	249,237,269	116.5

/1 A minus sign (-) denotes decrease.

Large Number of Contracts Awarded A Feature of Southern Industrial Activity for October.

During the four weeks of October the number of items published in the construction columns of the MANUFACTURERS RECORD totals 3,726, this number including 1,643 industrial development and 924 building items. In addition there were 8 railway items, 403 financial notices and 566 machinery, proposals and supplies wanted announcements. For the five issues in September the total number of items published was 4,415, including 1,907 industrial development and 1,175 build-

ing notices. The total for August was 3,494, of which 1,475 were industrial development items and 967 building notices.

Road and street construction items for October totaled 403, while dwelling projects numbered 228. School buildings were represented by 186 announcements, and miscellaneous factories by 158 notices. Motor garages and similar structures rank high with 148 items, while store projects totaled 110, and bridges, culverts and viaducts numbered 109.

The increase in activity in practically all lines noted during September was maintained at high level throughout the four weeks of October, and slackening in construction activity has been very slight throughout the South, the normal seasonal slump having manifested itself in but small degree. The number of items representing contracts actually awarded has been large recently, and promises to appear in larger proportion for some time owing to the efforts being made to get projects which were planned during the summer months well under way before cold weather hinders the work. The tables for October follow:

	Total for Oct.	Total for Jan. to Oct. (Inc.)
Industrial Developments.		
Airplanes, Stations, Etc.	0	26
Bridges, Culverts, Viaducts, Etc.	109	841
Canning and Packing Plants	19	186
Clayworking Plants	6	82
Coal Mines and Coke Ovens	32	602
Concrete and Cement Plants	3	60
Cotton Compresses and Gins	4	122
Cottonseed Oil Mills	4	31
Drainage Systems	21	188
Electric Plants	64	615
Fertilizer Factories	1	52
Flour, Feed and Meal Mills	13	170
Foundry and Machine Plants	26	379
Gas and Oil Enterprises	70	893
Hydro-Electric Plants	10	79
Ice and Cold Storage Plants	32	323
Iron and Steel Plants	0	5
Irrigation Systems	2	12
Land Developments	40	409
Lumber Manufacturing	26	323
Metal Working Plants	21	202
Mining	12	192
Miscellaneous Construction	35	452
Miscellaneous Enterprises	113	1,210
Miscellaneous Factories	158	1,495
Motor Cars, Garages, Tires, Etc.	148	1,126
Railway Shops, Terminals, Roundhouses, Etc.	3	43
Road and Street Construction	403	3,841
Sewer Construction	84	808
Shipbuilding Plants	1	21
Telephone Systems	19	171
Textile Mills	18	155
Water-Works	125	987
Woodworking Plants	21	321
	1,643	16,422
Buildings.		
Apartment Houses	53	591
Association and Fraternal	34	375
Bank and Office	45	509
Churches	65	1,057
City and County	26	282
Courthouses	2	78
Dwellings	228	2,286
Government and State	8	102
Hospitals, Sanitarium, Etc.	32	330
Hotels	49	421
Miscellaneous	34	466
Railway Stations, Sheds, Etc.	10	102
Schools	186	2,556
Stores	116	1,134
Theaters	14	269
Warehouses	22	317
	924	10,875
Railroad Construction.		
Railways	8	124
Street Railways	0	29
	8	153
Financial.		
Corporations	61	750
New Securities	342	3,583
	403	4,333
Machinery Wanted.		
Machinery, Proposals and Supplies Wanted	566	6,049
Fire Damage.		
Fire Damage, Etc.	182	1,833
Totals	3,726	39,665
Foreign	1	13

The Need of a Protective Tariff.

By HON. J. W. FORDNEY, Chairman of House Ways and Means Committee.

The House of Representatives recently passed two great revenue measures now before the Senate—the general tariff revision and the general revision of our internal revenue laws. The Senate has decided to take up the internal revenue bill and pass it ahead of the tariff bill. I think that is a most serious mistake. The manufacturers of this country can pay no profits until they are given the opportunity to make money.

We are importing at the rate of about \$300,000,000 worth of foreign goods per month into the United States. Most of those goods could be made here. There is not a manufactured article produced in the United States in which the labor cost is less than 90 per cent of the total cost—I mean following the raw material from start to finish. Now, if that is true, of the \$300,000,000 that we are sending abroad each month to buy foreign made goods, \$250,000,000 is going out from the people of the United States to employ German, French, English, Japanese and Chinese labor, while our laborers are walking the streets in idleness.

Under free trade we must come to a common level somewhere, if we compete with all the countries of the world. To-day German labor is getting from 60 to 65 cents per day in gold for ten or twelve hours. Japanese and Chinese labor to-day is getting from 12 to 18 cents per day in gold for twelve hours work. If we had to be placed on a par with the imports of those countries, do you believe we could lift those foreign countries up to our standard of living? Not at all. We have got to come down to a common level somewhere, but we are not ready to do that, and we are not going to do it.

The people of the country are demanding tariff revision. Some people say that Canada is going to retaliate. Canada is the best customer we have in the world, on the basis of population. There is no place in the world where our balance of trade is stronger than in Canada. Canada has no reason to complain about the rates fixed in the new tariff bill; none whatever. I will tell you why. Last year Canada collected \$19.50 in import duties for every man, woman and child in Canada. Great Britain, the great free trade country of the world, or said to be, collected \$16.50 per capita, or \$728,000,000. We collected \$3.15. Little Japan is collecting at the rate of 20 per cent ad valorem upon all her imports, dutiable and free. We have the lowest duty of any principal country on the face of the earth right now, and have had since 1913. One year, under the Payne tariff law, we had the greatest volume of imports of any year in the history of the republic up to that time—\$1,812,000,000, and on those imports we collected in round numbers \$331,000,000 in revenue import duties. Last year, under the Underwood tariff law, we imported \$5,300,000,000, worth of foreign goods and collected exactly the same amount of duty \$331,000,000, that was collected under the Payne tariff law on \$1,812,000,000 of imports, one-third the ad valorem rates of duty under the Underwood law that were collected under the Payne law. Had we collected the same percentage of duty on imports last year that were provided for in the Payne tariff law, we would have collected a billion dollars of revenue.

We hope that this new tariff bill will curtail imports. We believe it will, but there are no rates in that law that are prohibitive; none at all. We never had and never will have a tariff law that will be an embargo in imports. It would not be wise to do it. Wise men will not adopt such a law. But what we do want is to get, just as near as possible, in imposing an import duty on foreign goods, one that will bring the cost to the foreigner up to the level of our cost of production in this country.

No American is afraid of any foreigner, unless under our laws that foreigner has an advantage over him. The American is ingenious enough to hold the business of this country, unless you give his competitor an advantage over him. That is what we are afraid of, having the rates too low.

Way back in 1879 we had a provision in the tariff law to collect ad valorem duties on the American valuation. There was a future time fixed for that law to take effect, but before it took effect the great influence that the importer brought to bear induced Congress to repeal that provision of the law.

Some people are opposing American valuation, some of the great importers of the country. Some of them have sent out circulars appealing to the merchants of the country, the manufacturers, to appeal to their congressmen and their senators to oppose American valuation. Why? I will tell you why. Last year in the customs office of New York alone there were fifty-four cases of undervaluation, and this year they are running at the rate of five hundred cases a month.

Why do foreigners who export to this country or people of this country who import from foreign countries undervalue? Because they pay less duty. Profit is made in the duty if they can import at fifty cents on the dollar of the real value of the goods.

They say we cannot take care of some articles of import because we do not know their values. How ignorant we are! We now accept the foreigner's statement. Why not accept our own? Haven't you got more confidence in yourself than you have in a foreigner?

There is another good reason why we should have American valuation instead of foreign valuation. There is the exchange value of foreign money, a most troublesome question for us to equitably arrive at the correct values, because foreign moneys have different purchasing values in the countries of their origin than the exchange value over here, and it is most difficult for our customs collectors to determine those questions.

Canadian money to-day has an exchange value in the United States of about 85 cents on the dollar. The English pound, with a par value of \$4.86 over there, has an exchange value here of about \$3.72. The French franc with a par value of 19.3 cents has an exchange value here of between six and seven cents. The German mark, 23.8 cents par value, has an exchange value in the United States of about one cent, but it will buy seven or eight or ten times that value over in Germany.

American valuation will fix the valuation upon the gold dollar. Every dollar of our money since 1896 is worth one hundred cents, because it is all redeemable in gold, and we will eliminate those exchange values of foreign money by American valuation. Those are the two outstanding reasons for American valuation.

Five Thousand Acres in Truck

Three thousand acres will be planted in Irish potatoes by J. R. H. Hilton, on land he has under contract in the vicinity of Atmore, Ala., according to a press dispatch from Atmore. In addition to potatoes, Mr. Hilton has also contracts with farmers for the planting of 500 acres in strawberries, 300 acres in snap beans, 300 acres in early sweet potatoes and probably 200 acres in cucumbers, the entire acreage in crops for the market aggregating approximately 5000. Mr. Hilton is said to be the largest individual operator of his kind in the South.

Over \$25,000,000 in Building Permits for 57 Representative Southern Cities for September.

Building permits issued in September in 57 representative Southern cities had a total valuation of \$25,511,691 compared with a valuation for the same cities in August of \$27,018,323. During August the value of the permits issued in 55 cities was \$26,223,433 compared with the July valuation from the same cities, amounting to \$19,266,528. The figures for September are very encouraging in view of the high construction total for August which exceeded that of July by over 30 per cent taking the South as a whole. A slight decrease in building activity was noted throughout the country in August and this became more pronounced during September, showing that the normal seasonal reduction in building activities is at hand. However, the decreased activity is far less than was anticipated in some quarters. The decrease in building throughout the South during September as compared with the preceding month was slightly more than 5 per cent, and the decrease throughout the country was approximately 10 per cent.

That the seasonal slump in building activity has not appeared in any strong measure is due largely to the vast number of dwellings that are being erected in scores of Southern cities. The activity is widespread in its scope. Many repairs and additions to dwellings, are under way, while garages, sheds and similar structures are going up in large numbers. Similarly the construction of apartment houses and hotels, church and school buildings, bank and office structures, is making good progress.

The demand for building materials of all kinds is brisk, and prices have stiffened on some items of which there is a scarcity and limited production now. Sales of Southern pine lumber are being maintained at a high level.

The building activity during September is well rounded throughout the South, there being no spectacular increases or sharp decreases in any particular section—construction holding up well everywhere to near the high level established during the summer months.

The tables showing activity in building during the past two months are as follows:—

BUILDING PERMITS STATISTICS

	August		September	
	Permits No.	Issued Valuation	Permits No.	Issued Valuation
Alabama				
Birmingham	408	433,826	412	585,093
Montgomery	146	65,317	114	49,952
Arkansas				
Little Rock	241	232,859	261	256,853
Fort Smith			59	101,888
Pine Bluff	28	64,125	51	105,366
District of Columbia				
Washington	805	3,308,485	698	1,841,944
Florida				
Jacksonville	316	510,558	276	465,851
Miami	204	396,200	237	407,500
Orlando	110	291,305		
Pensacola	79	52,324	54	41,034
Tampa	287	364,838	261	363,226
Palm Beach		206,000		55,000
St. Petersburg				385,575
West Palm Beach		61,175	85	145,270
Georgia				
Atlanta	380	634,523	341	916,620
Augusta	241	149,058	220	115,904
Macon	93	114,705	92	114,700
Savannah	73	136,965	69	102,840
Kentucky				
Louisville	338	774,800	297	548,150
Lexington	60	69,845	56	70,799
Covington	67	239,740	62	91,600
Louisiana				
New Orleans	321	960,050	257	769,900
Shreveport	264	427,075	282	471,437
Maryland				
Baltimore	1685	2,301,240		2,476,600
Cumberland	53	113,160	48	136,630
Mississippi				
Jackson	14	37,050	19	67,700
Missouri				
Kansas City	208	2,613,350	496	1,865,580
Springfield	90	194,865	73	73,785
St. Joseph	75	207,275	94	70,200
North Carolina				
Asheville	106	212,126	100	249,718
Durham	30	67,310	43	59,535
Charlotte	41	218,035	59	314,495

Raleigh	31	206,000	42	903,060
Wilmington			29	98,300
Winston-Salem	113	132,832	137	154,746
Greensboro	31	145,825	61	312,500
Oklahoma				
Oklahoma City	297	791,076	310	889,530
Tulsa	124	245,985	157	391,350
Muskogee	41	99,830	47	121,865
Okmulgee	27	68,280	22	73,200
South Carolina				
Charleston	33	56,935	35	181,707
Columbia			146	156,684
Spartanburg			61	88,313
Tennessee				
Knoxville	149	253,050	172	264,186
Memphis	297	1,010,926	327	708,720
Nashville	393	647,957	315	517,103
Chattanooga	225	296,445	221	146,858
Texas				
Houston	726	926,552	697	1,135,148
Galveston	484	305,115	486	263,423
Fort Worth	219	491,521	196	514,657
Austin	51	509,264	38	68,614
Dallas	419	1,602,924	360	1,383,408
El Paso	163	504,558	165	603,500
Beaumont		73,839	134	754,775
Waco	49	134,605	51	104,229
San Antonio	390	1,150,605	243	589,335
Virginia				
Richmond	226	893,182	246	786,897
Norfolk	147	446,127	100	1,533,030
Lynchburg	34	37,810	31	30,725
Roanoke	119	147,692	140	392,315
West Virginia				
Charleston	128	328,650	97	413,139
Huntington	134	246,833	125	157,434
Wheeling	83	96,026	85	89,715

Houston-Pacific Coast Service Inaugurated.

Houston, Tex., October 31—[Special.]—Regular service between Port Houston and the Pacific coast will be added to the present sailings of the port, according to advices received by the trade extension department of the Houston Chamber of Commerce from Swayne & Hoyt, steamship operators of San Francisco. One boat on this service has already visited Houston, but the operators now state sailings will be made every three weeks or as often as cargoes will justify. The second vessel of the line to call at Port Houston is the Osage, scheduled to leave Seattle October 30, stopping also at San Francisco and Los Angeles. After leaving the Pacific Coast it will proceed direct to Port Houston, sufficient cargo having been assured by the Chamber of Commerce. It is expected that the line will be established on a permanent basis.

Final Contracts for \$1,000,000 Drainage Project Shortly to be Awarded.

Beaumont, Texas, October 29—[Special.]—It appears that the entire \$1,000,000 drainage project in this district will be contracted for before the end of the year. Guy W. Junker, Hal G. Land and Geo. W. Caswell, drainage commissioners, recently let contract for the work on the Hillebrandt bayou project, and announced that bids would be received to November 15 on the entire remainder of the work, which will cost \$800,000. The Lake Arthur Dredging Co. has the contract for excavating, clearing and grubbing. The project will involve the excavation of approximately 1,000,000 cubic yards, and will extend from Rosedale to Taylor's bayou.

Bright Outlook for Building in Tulsa.

Tulsa, Okla., October 15—[Special.]—According to H. E. Kopp, inspector of buildings there is approximately \$1,000,000 in new construction now in sight in this city, including a 10-story office building, an 8-story office building addition, and a 5-story apartment-store building, also many residences. During last month 157 permits involving the expenditure of \$391,350 were issued. There were 62 residences costing \$222,120, besides many additions and improvements to existing dwellings.

Freight Rates on Paper From Europe to New York Less Than Across New York State.

Chicago, Ill., Nov. 1.—[Special.]—"It costs \$2 less to ship a ton of newsprint paper from Germany to New York City than to ship a ton of the same paper from Niagara Falls across the state of New York.

"America's paper industry faces serious competition from foreign lands not alone because of the fact that foreign paper is made by cheap labor, under depreciated exchange conditions, but also of the cost of freight shipments."

These were two notable statements in a discussion of paper importations by R. S. Kellogg, Secretary of the News Print Service Bureau, before the Salesmen's Association of the Paper Industry, at the convention of that Association this morning. He then went on to give figures showing comparative freights between foreign shipping points and American points, as evidence of the conditions confronting the paper industry in general.

The rate from Hamburg to New York and other Eastern ports is \$4 per 1000 kilos or \$3.64 per ton of 2,000 pounds, and \$6 per long ton or \$5.36 per 2000 pounds from Scandinavia. Compared with this are rates from various important American mills. The rate from Watertown and Glens Falls to New York is \$5.60 and from Niagara Falls, \$5.70. The Watertown rate to Philadelphia and Baltimore is \$6.30. Typical rates from important Canadian shipping points to New York are: Espanola, Ont., \$10.50; Grand Mere, Que., \$7.60; Iroquois Falls, Ont., \$9.60; Jonquiere, Que., \$8.60; Ottawa, Ontario, \$7.60; Sault Ste. Marie, Ont., \$10.50; Three Rivers, Que., \$7.60. Maine-New York City rates are not much better than the Canadian, the Livermore Falls rate being \$6.40 and the Millinocket Rate \$7.70. From Port Edwards, Wis., to New York City is \$11.30; to Philadelphia \$10.90, and to Baltimore \$10.70.

"America, even with the best, fastest and most modern paper mills in the world," said Mr. Kellogg, "cannot successfully compete with the prices of European paper made and shipped under these conditions. It is the publishers who will suffer in the long run, for American mills cannot make paper to meet present European prices, and Europe cannot supply America's permanent needs. The normal result would be wide swings in prices which are always disadvantageous to producer and purchaser alike in any commodity where price extremes are found."

"It is better for the American user of newsprint to have a dependable source of supply at home at a price which affords a reasonable profit to the manufacturer and thus encourage greater production than to have a temporary supply from abroad at prices fixed by ruinous unfair competition, which will vanish when world conditions again approach normal."

Tuscaloosa to Have Paper Mill.

Tuscaloosa, Ala., October 22.—[Special.]—The Chamber of Commerce, through its Industrial Committee, has voted to organize a paper mill industry at Tuscaloosa. This city is considered a logical location for a plant of this character, having rail and water transportation; an unlimited supply of raw material for print, kraft and bond paper; cheap labor; plenty of water; cheap coal; electric power and the South, as a whole, a market for the finished product.

The report prepared by Forest Engineer, George Drolet, shows that he examined approximately 500,000 acres of spruce pines, an area 10 miles wide on both sides of the river. His estimate is placed at 726,000 cords, sufficient to operate a 50-ton print paper mill for 40 years. The estimated cost per

cord delivered at the mills is much less than the present cost of the same material at Northern mills.

The Industrial Committee is also interested in the production of bond and kraft paper, the same factors that would make possible the manufacture of news print paper being also available for these other products. In addition, such raw material as loblolly pine, tupelo gum, willow and many other species of wood that predominate in the South, could be easily utilized.

British Cotton Shipments.

Manchester, October 10.—[Special.]—The official statistics published by the British Government of the exports from the United Kingdom for the month of September so far as quantities are concerned show that the figures for cotton yarn are larger than those for any previous month this year and are almost equal to those for September 1913. The total for the nine months ended September 30th last however is less than last year, and amounts to only 58 per cent of the quantity for the same period of 1913. The comparative table is as follows:—

	September.	Nine Months Ended September.
	Lbs.	Lbs.
1913	15,734,400	154,761,700
1920	11,588,500	118,447,700
1921	15,697,300	90,592,600

Only six markets have taken increased quantities so far this year compared with last and these are:—

	Lbs.		Lbs.
Roumania	5,098,000	Bengal	1,344,000
Germany	4,652,000	Bulgaria	1,172,000
Bombay	1,694,000	Argentine Republic ..	127,000

The chief instances of decreased takings are:—

	Lbs.		Lbs.
France	10,192,000	Norway	1,553,000
Netherlands	8,008,000	China	1,324,000
United States ...	6,361,000	Egypt	940,000
Belgium	4,748,000	Straits Settlements ..	547,000
Denmark	1,681,000	Russia	499,000
Canada	1,007,000	Burmah	454,000

An analysis of the shipments of cotton piece goods reveals several interesting facts. Although as in the case of yarn the exports were higher than in any other month of this year the figures are considerably below those for September last, and are only equal to about half of what they were in 1913. For the nine months to the end of September last the total is much less than last year and is only about 53 per cent of the figures for the same period of 1913. Below will be found a comparative table:—

	September.	Nine Months Ended September.
	Yards.	Yards.
1913 ..	548,972,500	5,350,278,900
1920 ..	382,138,000	3,540,677,100
1921 ..	265,386,200	1,866,341,100

Not less than 45 outlets record decreased takings so far this year compared with last. A list of the principal ones is as follows:—

	Square Yards.		Square Yards.
Bombay	255,090,000	Straits Settlements ..	56,345,000
China	229,643,000	Argentine Republic ..	53,627,000
Turkey	170,781,000	Bengal	52,443,000
Egypt	127,560,000	Sweden	51,967,000
British West Africa ..	77,328,000	Dutch East Indies ..	49,450,000
United States	61,351,000	Burmah	43,147,000
The following markets have increased their			

The following markets have increased their consumption:

	Square Yards.		Square Yards.
Roumania	15,465,000	British East Africa ..	633,000
Mexico	1,373,000	Anglo-Egyptian Sudan ..	490,000
Morocco	898,000		

Rivers and Harbors Convention Postponed.

The Seventeenth Convention of the National Rivers and Harbors Congress, which would regularly have been held in December, has been postponed to some date after January 1, 1922, to be announced later. Important reports are in preparation, which it is understood will recommend radical changes in certain existing Governmental practices.

World Trade Cruise to Carry Products of American Manufacturers to Many Foreign Countries—Famous Steamship to Be Utilized.

The exhibits of 300 to 350 American manufacturers will be carried to the four points of the compass when the steamship "St. Louis" embarks next January on a World Trade Cruise—which will last until December 1922. Five hundred men are now at work reconditioning the vessel which according to specifications will be converted into an oil burner by the installation of Todd burners.

The contract for the conditioning of the famous liner was awarded to the Todd Shipyards Corporation by the Anderson Overseas Corporation, New York City, owners of the "St. Louis." The work will be performed at the Robins Dry Dock and Repair Company's plant in Erie Basin and will provide employment for hundreds of shipworkers until after Christmas. The actual cost of conditioning the "St. Louis" has not been stated, but it is believed that it will run into many thousands of dollars. The contract calls for the ship to be complete and ready for sea in the early part of January.

The plans for the World Trade Cruise have been carefully prepared. In asking the participation of American manufacturers, the aim has been to make the exhibitors representative of American industry and not have any one group of industries dominate the exhibit. Couriers will be sent in advance to each country to be visited and, through aggressive publicity, they will center attention upon the visit of the ship and thus prepare for its arrival. The Anderson Overseas Corporation, which is the standing sponsor for the cruise, is an old established steamship organization familiar with trade requirements and trade routes in all parts of the world.

"The 'St. Louis' will be equipped with every modern device known for the comfort and safety of her passengers. The arrangement of the ship will differ to some extent from what it was at the time when she was the crack ship of the American line. Because of the climatic conditions to be met with during the eleven months cruise, a ventilation system which will serve all the inner and lower rooms in hot countries, and a heating system which will make the same rooms and quarters comfortable in cold countries, has been fully arranged for. A fully equipped hospital, with isolation ward, operating room, etc., is also included in the plan. On account of one entire deck having been reserved for exhibition purposes, as well as portions of three other decks, great care had to be exercised so that the comfort and safety of the passengers would not be interfered with. One exhibition deck, however, will have uninterrupted space for exhibits of about 550 feet long. This does not include the automobile section, which will carry practically a New York automobile show around the world.

At the offices of the Anderson Overseas Corporation it was stated that strict instructions were given the Todd Shipyards Corporation that the "St. Louis" when finished, must be as modern as any ship afloat, as comfortable as the most comfortable, and as safe as it is possible to make her—the pride of the American Nation, whose manufacturers' products she will carry to the four quarters of the globe. The Corporation states that accommodation and space on the "St. Louis" for the Cruise will probably be over-sold, as most of the large cities in the United States have taken an active interest in the project with the aim of having their industries well represented and their cities advertised.

The "St. Louis" was the first 100%, all steel American steamer ever built, and at the time was the fastest and most modern and the finest ship afloat. She was christened by the former Mrs. Grover Cleveland at Philadelphia, President Cleveland and his Cabinet attending.

A Business Gospel Proclaimed.

Industrial Board
Chattanooga Chamber of Commerce.

Chattanooga, Tenn., October 24, 1921.

Editor Manufacturers Record:

The railway strike may be pulled off, but undoubtedly the teeth will have been extracted first, public opinion officiating. Now, that the old country doctor seems to be getting into the saddle, why not keep him there, with his old kit of tools and simple American remedies for American ailments, until we, the people, can get it into the heads and hearts of these chronic grumblers, labor and railroad capital, that there are a few things we want fairly and permanently adjusted?

We want labor to understand that a day's work means a day's pay, and that a day's pay means a day's work, whether it is in darning socks or building a locomotive, tamping ties or setting a valve, the only classification being the workmen's "honest to God ability."

We also want him to get out of his system, for all time to come, the virus of government ownership of railroads.

We want the Adamson monstrosity repealed, the Interstate Commerce Commission permanently smothered or rebuilt in man and method; we want the owners of railroads to quit whining and do some sure-enough management, dismissing from their minds, all vision of swapping rail securities for government obligations.

We want them to recognize that eight hours is an American legal day's work; that the laborer is worthy of his hire when he honestly earns it.

And then we want railroad management to appreciate the wide difference between transportation and confiscation.

The value of transportation is not rightfully reckoned upon the price of the article at point of production or at point of consumption, transportation is a commodity; it is worth what it takes to produce it, plus a fair profit over all and no more and no less.

Freight rate basing points belong to the horse-drawn street car period, and should go along with a lot of old time rail management and new time management graduated under old time professors, whose vision covers the four-ft., eight and a half inch space between the rails.

We want the old time competition of service, reasonable and stabilized freight rates, that permit the producer to exchange his wares for cash or its equivalent, with any section of this country, that would not do violence to recognized transportation limitations.

Ninety per cent of the makers of tonnage will agree on all of this. Is it an impossible thing to do?

CHAS. W. HOWARD, Manager.

Enlarged Plant Manufactures Auto Parts for World Markets.

Florence, S. C., October 25.—[Special.]—A machine shop and other modern machinery has been installed at the plant here of J. L. Bridgers Co., manufacturers of auto parts, greatly enlarging its capacity and facilities to handle the increased demand. This new industry is shipping its products to all parts of the world, chiefly to South America, Australia, France and England. A very large domestic and Canadian business is handled, a big \$100,000 order recently having been received from the Pacific coast, and even the Detroit market has been entered by this South Carolina firm, and a good business built by the high quality of goods made. The plant represents an investment of \$200,000, and so far as is known, is the only one of its kind in the South.

THE IRON AND STEEL SITUATION

Moderate Increase in Steel Ingot Production.

Pittsburgh, Pa., October 29—[Special.]—Production of steel ingots is at a rate nearer 40 per cent than 35 per cent of capacity, showing a moderate increase over the rate in September, which averaged about 32 per cent. The increase is due to the heavier buying of recent weeks, but in the past couple weeks there has been no increase in the total of buying, though tubular goods, particularly standard pipe and oil country goods, show some further improvement.

While the buying for several months past has been chiefly of the hand-to-mouth character, there has lately been some covering by contracts to the end of the year, so that the mills may be able to maintain production fairly well at the present rate without a great deal of additional buying. Much of this business was taken at price concessions, the seller expecting to build up an order book that would enable him to advance his asking prices. While such campaigns have not been altogether as successful as was hoped, they have done some good.

As to prices, the finished steel market is backing and filling rather than definitely advancing or declining. In spots there is greater firmness, in other spots a plainer tendency toward weakness. In particular, the disregard of Pittsburgh basing is growing. In most products Chicago got away from Pittsburgh basing several months ago, while lately the Buffalo and eastern Pennsylvania markets have been conspicuous in this respect. In both districts bars are being sold at delivered prices much less than the Pittsburgh price plus freight, but the sales net the sellers more f. o. b. their mills than the Pittsburgh price.

The reduction in rail prices announced a week ago was timed for its sentimental effect upon the railroad wage and freight rate situation and as a possible inducement to railroads to specify additional rollings for this year on their rail contracts. The roads contracted for about 1,500,000 tons for 1921 but have taken out only about 1,000,000 tons. It has been a foregone conclusion for months that rail prices would be reduced before railroads were expected to place contracts for 1922. The prices lately ruling, \$45 per gross ton for Bessemer rails and \$47 for open-hearth, are Industrial Board prices of all other steel products in that schedule, which became effective March 21, 1919, have come down greatly. The new price is \$40 for either Bessemer or open-hearth. Bessemer rails were \$28 from February, 1901, to May, 1916, while open-hearth rails were \$30 from 1906 to the same time, so that rails are now one-third above the pre-war price, Bessemer rails being no longer a factor, and that is approximately the ratio that obtains in other finished steel products.

The Steel Corporation's earnings report for the September quarter requires that appraisals of the future of steel prices and steel company earnings be revised. It will be possible to sell steel at still lower prices and still furnish profits, provided there is a fair operating rate, at such percentages as obtained before the war. The Steel Corporation's earnings, after payment of subsidiary company bond interest, were: July, \$5,157,395; August, \$6,502,976; September, \$7,257,687; total, \$18,918,058. Prices declined very considerably from July to August, but very little from August to September. Economies in operation had a progressive effect, while there was a wage reduction August 29. Shipments were about 25 per cent of capacity in July, 30 per cent in August and 34 per cent in September. The good influences outranked the bad and caused a progressive increase in earnings.

September, with wage rates as at present, and prices substantially the same, may be used for comparative purposes.

The reported earnings amounted to more than \$15 per ton. With a larger operation, something approaching pre-war rates, costs per ton would be lower and earnings per ton higher, so that profits would be very good.

Market Firm With Improved Conditions Indicated in Birmingham District.

Birmingham, Ala., October 31—[Special.]—The pig iron quotations in the Birmingham district continue firm on a \$19 per ton basis, No. 2 foundry, 1.75 to 2.25 per cent silicon. Some further sales, though not in extensive tonnages, have been booked for delivery during the first three months of 1922. Immediate delivery business is wanted by the furnace companies. With an increased make, sales are necessary to prevent accumulation. There has been no iron placed on yards in this district this month, according to the best information and it is hardly believed it will be necessary to pile any this year. Those companies not making iron are reducing their stocks steadily and have hopes of being able to start a furnace or two.

The local pig iron consumers are still very active. Sanitary pipe plants, especially, are producing heavily and selling steadily. In the Anniston section of the Birmingham district, every foundry producing pipe, both cast iron or high pressure and sanitary pipe, are in operation, some of them on full speed. A large quantity of pig iron is being melted in this section. Reports from Anniston state that conditions have almost reached normal.

Cast iron pipe plants in the South are still producing on a liberal scale, the market holding up later this year than before. Shipments of high pressure pipe will continue through the year and take up impetus again early in 1922. The larger machine shops and foundries are looking forward now to an activity, the strike on the railroads being obviated and general business conditions are expected to take on improvement. Expectations are for some big business for sugar machinery and so on.

Steel plants are still on a basis of operations around 60 per cent in this district, some departments of the plants—rail, steel wire and wire products for instance—being at 100 per cent capacity. The export business in steel products is still proving of great value to this section.

The production of bituminous coal is increasing steadily but there is still a wide difference in the output today and what it was two years ago. The coke market is taking on strength, so far as demand is concerned, and output is being increased, but the prices remain around \$5 and \$6 for furnace and foundry coke, respectively. There is a good demand for the output of the various by-product coke oven plants in this district.

Quotations of pig iron and iron and steel scrap in the Birmingham district show little change this week.

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$19.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$19.50; iron of 2.75 to 3.25 per cent silicon, \$20.00; iron of 3.25 to 3.75 per cent silicon, \$20.50; iron of 3.75 to 4.25 per cent silicon, \$21.00; charcoal iron, f. o. b. furnaces, \$35.00.

OLD MATERIAL.

Old steel axles	.....	\$17.00	to	\$18.00
Old iron axles	.....	20.00	to	21.50
Old steel rails	.....	12.00	to	13.50
Heavy melting steel	.....	11.00	to	14.00
No. 1 R. R. wrought	.....	12.50	to	14.00
No. 1 cast	.....	17.00	to	18.00
Stove plate	.....	12.50	to	14.00
Old car wheels	.....	14.00	to	15.00
Old tramcar wheel	.....	13.00	to	13.50
Machine shop turnings	.....	4.00	to	5.00
Cast iron borings	.....	4.00	to	5.00

RAILROADS

B. & O. Earnings Show Improvement.

The statement of operations of the Baltimore & Ohio Railroad covering the month of September displays a small gain in operating income as compared with the same month of last year. Railway operating revenues were \$17,468,612; decrease, \$7,101,787; railway operating expenses, \$13,564,179; decrease, \$7,145,489; net revenue from railway operations, \$3,904,433; increase, \$43,702; net railway operating income after deducting taxes, rentals, etc., \$3,055,536; increase \$154,546. Maintenance of equipment cost \$2,500,000 less and cost of conducting transportation was \$4,100,000 less than in September 1920. About \$2,450,000 was spent for maintenance of way and structures, but this showed about \$590,000 less.

The railway operating revenues for the nine months of the current calendar year totaled \$148,170,774, a decrease of over \$14,400,000; railway operating expenses were \$125,093,453, a decline of over \$39,000,000; and net revenue was over \$23,000,000, an increase of \$24,700,000 because there a deficit in September 1920, and net income from operations \$15,271,197, an increase of \$23,800,000 because the deficit a year ago was over \$8,500,000.

Inquiries for New Equipment, Etc.

Seaboard Air Line is reported in the market for 1,000 ventilated box cars, 700 flat cars and 300 phosphate cars, or else 500 ventilated box cars, 500 ordinary box cars, and 1,000 gondola cars with low sides.

Inquiries for motive power reported include a geared locomotive of 60 tons for the W. T. Smith Lumber Co., Chapman, Ala., and a 35 tons geared locomotive for the Tennessee Stave & Lumber Co., Oneida, Tenn.

Tampa Electric Co., Tampa, Fla., is receiving 12 street cars of the Birney type from St. Louis.

Mobile & Ohio Railroad will let contract to repair 1,000 box cars.

Virginia Bridge & Iron Co., Roanoke, Va., will repair 4,000 cars for the Virginian Railway Co.

Chicago, Rock Island & Pacific Railway has ordered 200 composite coal cars from the General American Car Co., Chicago.

Chesapeake & Ohio Railway is noted in the market for 1,000 composite gondola cars and 2,000 steel coal cars.

Increased Freight Movement.

The car service division of the American Railroad Association reports that the railroads during the week ended October 15 loaded 906,034 cars during revenue freight, an increase of 10,404 cars as compared with the preceeding week. This was the largest weekly loading reported since November 13 of last year and the greatest gain was in the loading of coal cars.

Petition to Abandon Line.

C. W. Dudley, receiver of the Franklin & Pittsylvania Railroad Co., has applied to the Interstate Commerce Commission for permission to abandon the line because the traffic does not produce enough revenue to cover the cost of operation. The line is 30 miles long from Rocky Mount to Pittsville, Va.

\$4,570,000 Bonds for Betterments.

The St. Louis-San Francisco Railroad has been authorized by the Interstate Commerce Commission to issue \$4,578,000 prior lien bonds for betterments.

Reconsignment Charge Abolished.

Mobile, Ala., October 27—[Special]—As of October 25 the Mobile & Ohio Railroad announces that the reconsigning charge of \$6 per car on export freight received at Mobile is eliminated, thus effecting a saving in the transportation cost of commodities passing through this port. For handling cars not consigned to a particular wharf or pier the railroads made the extra charge which ship operators and exporters claimed was a burdensome tax, working a discrimination against Mobile. Under the new rule cars will be delivered to any wharf or pier as desired by the exporter or ship operator free of the reconsignment charge. It is stated that the Louisville & Nashville Railroad and the Southern Railway will make similar announcements.

Lower Freight Rate Asked on Dyes.

Mobile, Ala., October 27—[Special.]—E. W. Richle, general freight and passenger agent of the Gulf, Mobile and Northern Railroad, has applied to the Southern Rate Committee for a reduction in the rate on dyes from Mobile to the north and west. Dye woods are imported from Central America and the Windward Islands and worked into dyes at the American Dye Works Company's plant in Mobile, but since the increased freight rates went into effect the company has been handicapped in the northern markets. The company has enlarged its plant during the present year, since it took over the properties of the Consumers Dye Works Company.

An Up-to-Date Street Car Line.

The Valdosta Street Railway, Valdosta, Ga., has recently been placed "in better condition than at any time in its twenty years of existence," to quote a local statement, which also says that the cars have been rebuilt and repainted like new, and they are run more frequently, several miles of new copper wire have been erected and the rails have been bonded to conserve current. "C. M. Killian, now the virtual owner of the line, takes a personal pride in keeping it in every way creditable to the community."

Chief Engineer Appointed.

J. B. Akers has been appointed chief engineer of maintenance of way and structures on the Southern Railway, succeeding J. S. Lemond who had reached the age of retirement. His office will be at Charlotte, N. C., J. A. Killian has been appointed engineer of maintenance of way at Knoxville, Tenn., to succeed Mr. Akers. Mr. Lemond will will continue with the company in an advisory capacity as assistant chief engineer of maintenance of way and structures.

Sale of Line Postponed.

The sale of the Ocklawaha Valley Railroad which was set for November 7 at Silver Spring, Fla., has been postponed until December 5 under an agreement between the State authorities and the receiver of the road. It is stated that a new proposition has been made to settle the \$19,000. tax debt owed by the line. It is noted that the development of 56,000 acres of timber adjacent to the road is expected to soon add considerably to its traffic.

Railroads Employing More Men.

The Seaboard Air Line Railway has reopened the shops at Portsmouth, Va., employing 900 hands.

Norfolk & Western Railway, has recalled to work 150 men who were laid off at the Roanoke shops some time ago.

St. Louis Southwestern Railway has taken on about 50 hands in its shops at Pine Bluff, Ark.

Warns Against Amendment of the Transportation Act.

The committee on public relations of the National Association of Owners of Railway Securities have sent to members of the Association and others interested a communication pointing out the dangers attending amendment of the Transportation Act of 1920. President S. Davies Warfield says: "The necessity of preserving in the Transportation Act the only hope of producing a reasonable return on railroad property and for retaining these properties under private ownership and operation, justifies our asking your attention to the enclosed communication." A striking sentence in the communication and in reference to the Interstate Commerce Commission says: "If Congress cannot leave to its own agency the adjustment of rates to produce the return indicated as the minimum that will sustain transportation, then regulation by Commission fails." Again: "The Transportation Act has not had any trial as yet. It should be given the fullest opportunity under scientific methods of rate adjustment, which with proper economies and care will work out the problem before the country." Also: "We urge upon those who control the fate of the great enterprise of transportation that they carefully study conditions before taking a step that may prove to be the undoing of the private ownership and operation of railroad properties."

Contract Let for Dallas-Terrell Line.

Construction of the long proposed interurban electric railway from Dallas eastward to Terrell, Tex., about 30 miles, is now apparently assured. The Texas Interurban Railway Co., has let the general construction contract to the Texas Construction Company which has sublet the grading and trestling to the Allhands & Davis Construction Co., of Kansas City, this part of the work to cost about \$120,000, although the entire cost of the line is expected to be about \$1,600,000. Richard Meriwether of Dallas has charge of the construction as representing the railway company and work will begin immediately. The grading and erection of trestles is to be finished by May 18 next and then the Texas Construction Co., with its own forces will lay the track and erect the overhead work. The contract for power equipment, etc. is soon to be let.

Huge American Locomotive for China.

The American Locomotive Company has built a Mallet compound locomotive for the Suiyuan Railroad of China. It was built at the Schenectady works of the manufacturers and it is said to be the largest railroad engine ever shipped from the United States and furthermore that it will be the largest locomotive in service outside this country. The locomotive with tender measures 94 feet 9 inches over all, and its total weight ready for use is 320 tons, the maximum horsepower being 3,000.

Large Road and Bridge Contracts Awarded.

A contract for the construction of 14.67 miles of gravel road in Colbert County, Alabama, has been awarded by the State Highway Commission to J. W. Gwin of Birmingham at \$138,518. A contract was also awarded for the construction of a bridge across the Warrior River at Tuscaloosa. The contract for the sub-structure was let to J. A. Peterson of Montgomery at \$47,290 and for the super-structure to the Virginia Bridge & Iron Co. of Roanoke, Va., at \$130,950.

Street Paving for Laredo.

A \$150,000 bond issue for street paving has been authorized by the city Laredo, Tex. The business section will be paved first, after which other portions of the city will be improved.

TEXTILE

New Dyeing Plant Completed.

Greenville, S. C., October 28.—[Special.]—With the completion of the new dyeing plant here, Greenville will have the last phase necessary to make complete cycle in cotton manufacturing, from raw to finished state in its city limits. This latest industry is a branch of the Franklin Process Co., of Providence, R. I., who also have a branch in Manchester, Eng. A new process will be employed in that the yarn will be dyed in the wound form instead of the skein, as by old methods, and found to be cheaper and more thorough. This being the only plant of its kind in the South, mills from Texas to Virginia will ship their yarns here for dyeing, effecting a great saving in time and long freight haul.

Contract Awarded for 24 Cotton Mill Store Buildings.

J. E. Sirrine & Co., engineers, Greenville, S. C., advise the MANUFACTURERS RECORD that a general contract was awarded, October 22 to Potter & Shackelford of Greenville, S. C., for the erection of two blocks of store buildings for the Republic Cotton Mills at Great Falls, S. C., each block comprising 12 stores of face brick, plate glass and copper construction. The total cost is \$85,000. Each store is approximately 22 x 60 feet and the general contract provides for ornamental terra-cotta trim, wood floors, metal ceilings, tar and gravel roofing, plumbing and electrical work.

Bag Factory for New Orleans.

The Fulton Bag & Cotton Mills has awarded the contract for the erection of its proposed bag factory at New Orleans, La., to the O. M. Gwin Construction Co. of New Orleans at \$63,050. The building will be of mill construction with composition roofing. Other features of the building, include maple and concrete floors, metal doors, rolling partitions, steel sash and trim, ventilators, hollow fireproof tile and wire glass.

Textile Mill Notes.

The erection of a cotton waste house is contemplated by the Fort Mill Manufacturing Co., of Fort Mill, S. C.

A plant for the manufacture of cotton batting is being erected at Charleston, S. C., by the Southern Cotton Batting Co., a new company organized with A. A. Hirsch as president.

The plant of the Ocala Knitting & Mfg. Co., at Ocala, Fla., has resumed operations under the name of the Florida Knitting Mills. J. M. Jackson is manager.

A knitting mill to provide employment for 150 operatives is being erected at Philadelphia, Tenn., by the Philadelphia Knitting Mills, organized with an initial capital of \$25,000. J. H. Thompson is president.

The manufacture of women's silk hosiery will be undertaken by Jno. C. Farley, Jr., proprietor of Farley's Hosiery Mill, now producing children's hosiery. It is understood that 200-needle, 3½-inch cylinder, knitting machines will be installed.

\$372,000 Contract Let for State Highway.

Allen & Harrison of Oklahoma City have been awarded a contract at \$372,225 by the State Highway Department to construct 11 miles of highway between Okmulgee and Beggs, Okla. A contract was also let to the St. Louis Structural Steel Co. of St. Louis, Mo., at \$19,525 to build a bridge over the North Canadian river near Oklahoma City.

LUMBER AND BUILDING MATERIALS

Hardwood Market Shows Improved Condition.

Memphis, Tenn., October 29—[Special.]—Increased buying on the part of foreign and domestic consumers recently has given the hardwood market a stronger tone than for more than a year, and trading seems decidedly on the upward trend. Developments in the transportation situation within the next week or so will determine whether the present activity in the hardwood market is a forerunner of a permanent revival or only a temporary spurt.

All classes of hardwood users have come into the market recently with the result that prices have stiffened due to concerted buying. Many persons familiar with conditions believe that buyers are just covering their requirements for this year, and predict that the real buying will take place shortly after the Christmas holidays and the subsequent inventory period. Some manufacturers believe that buyers are alarmed over prospects of a hardwood shortage next year and will accordingly place orders to the limit. Those holding this view look for big advances in hardwood prices soon.

Many furniture manufacturers who insisted some weeks ago that they had ample supplies of lumber on hand have decided suddenly that they need large stocks of hardwoods, and inquiries and orders are coming by mail and telegraph from Grand Rapids, Chicago, St. Louis, Jamestown and other important manufacturing centers.

There has been no slackening of demand from the building trades. Flooring manufacturers are buying heavily. They have made inroads on the available stocks of No. 1 Common plain oak with a result that some consumers are taking lower grades.

Since the overseas trade began six or eight weeks ago approximately 1,500 cars of hardwood lumber have been moved, a withdrawal of some 20,000,000 feet of lumber from Southern stocks. This was largely the result of the big reduction in ocean freight rates.

Demand for Southern Pine Continues to Increase.

New Orleans, La., October 29—[Special.]—According to the October issue of the Southern Pine Association summary of economic conditions and industrial statistics, the demand for Southern pine lumber based on the average order received per mill may safely be said to have shown no such a continuously upward trend as has taken place during the past two or three months, since the early days of 1918. Beginning with the first week of August when an average per mill of 496,181 was reported, orders gradually increased, reaching a high point for the week ended September 16 with an average of 777,369 feet, which is the eighth largest weekly order filed on record, and has not been exceeded since March 1918. Shipments per mill for the week ended October 7 exceed those reported for any week since that of September 4, 1917. Production for the week ended September 23 has not been exceeded since January 1918.

Cost reports from 75 subscribers of the association for August, 1921, show a preliminary average total cost of production per thousand of \$21.87. Sixty-six of these subscribers show a total average of \$21.37 per thousand. The average sales of \$21.67 per thousand is the lowest realization figure shown in the records of the Southern Pine Association, and is 62 per cent below the peak price of \$56.25 reported in April, 1920. The August cost is 33 per cent under the peak cost of \$32.79 reported for June, 1920. Reports from 183 mills for September, 1921, show stocks on September 1 of 1,219,953,054 feet compared with the October 1 figure of 1,170,765,635 feet, a decrease of 49,192,419 feet or 4.04 per cent.

Heavy Shipments of Southern Pine.

New Orleans, La., October 29—[Special.]—Sales for the week ending October 21 average 657,992 feet per mill for 142 mills reporting to the Southern Pine Association. Orders for the week total 4301 cars totalling 33,434,924 feet. Shipments amounted to 96,628,352 feet, an average per mill of 680,481 feet. Production for the week was 77,701,748 feet or 16.60 per cent below normal. Orders were 20.25 per cent above production or 15,733,176 feet. Orders were only .29 per cent above normal production, with shipments 3.72 per cent above normal production. The decrease in "orders on hand" during the week amounted to 1.02 per cent.

Following is the report for the week:

Orders on hand beginning of week.....	14,428	313,433.872
Orders received during week.....	4,301	93,434.924
Total	18,729	406,868.796
Shipments during week	4,448	96,628,352
Orders on hand end of week.....	14,281	310,240.444

To Establish Gravel Dredging Plant in Alabama.

Flomaton, Ala., October 29—[Special.]—The Escambia Sand & Gravel Corp., are putting in a gravel dredging plant near this place, 40 miles north of Pensacola, Fla. Full operations are expected to start within the next 30 days. The officers of the company are: C. D. S. Clarkson, president; C. H. Harrell, vice-president; and R. H. Downman, secretary-treasurer.

Increasing Signs of Business Revival in Many Lines at Richmond.

Richmond, Va., October 22—[Special.]—Paper, iron, tobacco, leather, paint, and oil plants here are responding to the revival of business, and increased orders in the other trades are resulting in increased production in many lines. Many plants are resuming full time operation and employing additional help, and optimism prevails.

The Standard Paper Manufacturing Co., which has been making improvements and extensions over a period of several years is just beginning to run on a full time basis. A new mill costing \$800,000 is fast nearing completion. The Southern Stove Co. began operations on October 1 with one-half force running five days weekly, and expects to be operating at full capacity by the middle of November. It is now occupying a new plant that cost \$250,000. On September 15 the Atlantic Varnish Works changed from half time to full time operation. The Richmond Pressed Metal Co., which recently made improvements and additions to its equipment expects to run at a high rate during the fall and winter months.

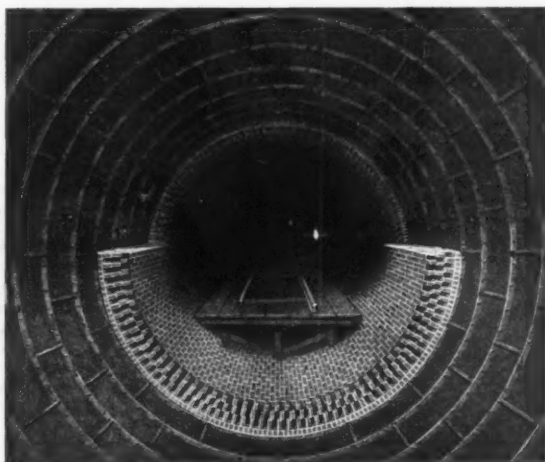
The outlook for increased business is good according to Pohligh Brothers, who have just completed a \$20,000 folding box department; The Richmond Corrugated Paper Co. and A. S. Kratz Co. also report the outlook as favorable. The Fibre Board Container Co. has just completed an additional unit and has added to its force during the past 30 days. Larus & Brothers Co. now occupy their huge new factory, and state that orders are coming in rapidly with a result that the production of cigarettes is being pushed with a full force, and an increase in business over the same period 1920 is reported. John Foege & Son will shortly complete their new factory, and this will necessitate a doubling in the working force. Jerry Brothers Belting Co. plan a modern two-story factory, as a result of increased business. The Cottrell Saddlery Co. anticipates increased business.

MECHANICAL

Steel Liner Plates in Tunnel Work.

Tunneling by modern methods includes the use of pressed steel liner plates to support the earth. These plates are made in flanged sections which are bolted together producing a continuous rigid tube or shell which can be carried forward for a considerable distance in advance of the masonry work. They are, it is observed, equally satisfactory whether used for brick or concrete construction. Removable steel forms can be used for the inner face of the tunnel.

Safety is assured to the tunnel builders by the provision of this strong steel lining, while convenience and economy,



TUNNEL BUILDING WITH STEEL LINER PLATES.

together with saving in shoring, also result from the use of small sized sections and the rigid continuity that is secured by bolting them together. It is remarked, furthermore, that the entire construction work is done faster on account of the simplicity in the use of plates and also because the tunnelers can keep ahead of the masonry forces.

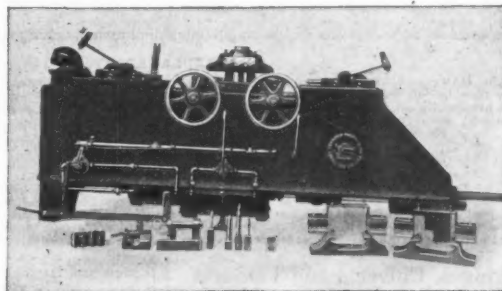
In the picture accompanying this article is shown the interior of a large sewer tunnel in process of building at Detroit, Michigan, the liner plates employed having been manufactured by the Truscon Steel Company, of Youngstown, Ohio, which also makes a large variety of steel forms. The tunnel shown measures in outside diameter from 12 feet to 13 feet 8 inches.

Hose Dismantling and Assembling Machine.

A machine for dismantling and assembling air brake, air signal and steam hose rapidly and without damaging the hose fittings, is illustrated herewith. It was invented after years of study and practical experience by three railroad men,—W. D. Faidley, Jr., S. A. Patterson, and J. W. Morris for use in railroad shops. Old methods of doing this work have, it is remarked, been expensive as to labor and also as to the high percentage of fittings damaged in the processes.

The "Covington" machine, it is asserted, insures recovery of all hose fittings, including the clamps, absolutely no damage being done to them and the assembling is done better than by hand. The saving in hose fittings alone amounted in one railroad shop to more than \$3,000, within a year, while the labor saving is said to be enormous as compared with other methods. On a test run one man dismantled 100 air hose in an hour and assembled 25 air hose ready for

service in an equal time. A man of average ability can become expert in 10 days. Changes from one operation to another average less than two minutes and hose in any condition can be handed.



HOSE MACHINE AND TOOLS.

The picture includes the entire equipment of tools used with the machine, which is manufactured by the Covington Machine Co., Inc., Covington, Va.

Commendations, Kicks and Comments

Wants Every Voter to See it.

C. E. Zahn, Mt. Sterling, Ohio.—I know I am late in paying but can't do without the news and topics I get from the RECORD. Best thing ever happened if it could go to every voter.

Information Always Timely.

L. W. HAMBLIN, Manager, Bristol Hosiery Mills, Bristol, Tenn.—Enclosed find our check for \$6.50 for year's subscription. We wish to take this means of informing you that we derive material benefits from your paper. Your information is always timely and informing and we class your paper as the real exponent of conditions throughout the country, and it is always a pleasure to renew our subscription.

Down on the Fanatical Deflators.

M. W. SALTER, Southern States Life Insurance Co., Bartol, Ga.—Enclosed find check for \$2.00. I wish to accept your offer of four months subscription to the RECORD.

The fight you have been making on the fanatical deflators deserves the support of all who have a kind feeling for the welfare of the common people. Hope you will continue to expose these exponents of invested wealth who are willing to crucify the masses in order to satisfy their implacable greed.

Cannot Get Along Without It.

J. S. WHITE, Secretary, The White Furniture Company, Mebane, N. C.—We gladly enclose our check for \$6.50 to cover our subscription for the ensuing year. We beg of you to kindly see that we do not miss a single number, and we want you to advise us whenever our subscription expires, as we cannot get along without the MANUFACTURERS RECORD.

We cannot begin to express our appreciation of your efforts, and we wish for your editor a long life and happiness, as well as to those who co-operate with him.

A True View Point of Government.

S. Q. SEVIER, Little Rock, Ark.—I hand you check covering year's subscription to your valuable journal. You cannot be too highly commended for your fearless and outspoken advocacy of the principles which constitute the foundation upon which our representative Government is builded. It is unfortunate, perhaps a pity, the great mass of our people grope in the dark because of the paucity of publications of your vision and ability.

The idea that representative Government was instituted for the purpose of making money—a profit for its own use and benefit and to set a limit on the profit of private enterprises, must be eliminated from the mind of freemen.

Representative Government was conceived and instituted to protect and encourage individual initiative and thrift. The individual is the unit upon which representative government is organized and held in line. The unit destroyed or disabled, the structure is bound to fall.

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

Ala., Tuscaloosa—State Highway Dept., Montgomery, Ala., let contract for bridge across Warrior river; total length of bridge 633-ft.; sub-structure to J. A. Peterson, Montgomery, Ala., at \$47,299.44; superstructure to Virginia Bridge & Iron Co., Roanoke, Va., at \$130,950. (Lately noted inviting bids.)

Ark., Fayetteville — Washington County will build 100-ft. steel bridge with concrete abutments over town branch; bids until Nov. 7, at office of Hamilton & Shreve, Engrs. (See Machinery Wanted—Bridge Construction.)

D. C., Washington—Dist. Comms. will build concrete trestle bridge and bins at N St., N. E.; low bidder R. J. Mansfield, New York, at \$14,089.

Ga., Dalton — Whitfield and Murray Counties will build county line bridge over Sugar Creek; bids until Nov. 12; H. J. Wood, Chrmn., Whitfield County Comms., Dalton, Ga.; W. D. Wilbanks, Chrmn. Murray County Comms., Chatsworth, Ga. Lately noted. (See Machinery Wanted—Bridge Construction.)

Ga., Millen—Jenkins County will construct bridge across Ogeechee river on road to Metter and Statesboro; 1,250-ft. long; cost \$18,000.

Mo., Boonville—Old Trails Bridge Co., H. C. Neel, Secy., plans building bridge across Missouri river; 4-span, all steel construction with concrete reinforced approach on south side and dirt and piling approach on north side; cost \$500,000; Harrington, Howard and Ash, Engrs., Kansas City, Mo. (Lately noted.)

Mo., Chillicothe — State Highway Dept., Jefferson City, Mo., will build 2 reinforced concrete abutments for 30-ft. through girder span of reinforced concrete on state road from Utica to Chillicothe; cost \$11,025; also 2 reinforced concrete abutments for 30-ft. reinforced concrete through girder span; cost \$8,320; both Livingston County; A. C. Singley, Div. Engr., St. Joseph, Mo.

Mo., Fulton—New Bloomfield Special Road Dist., J. L. Adkinson, Chrmn., Holts Summit, Mo., will build bridge across Middle river; \$11,000 available.

Mo., Lamar—State Highway Dept., Jefferson City, Mo., will build 16-ft. reinforced concrete slab span bridge on state road northeast and west of Lamar; Barton County, State Aid Project 20.104; bids until Nov. 3. (Previously noted.)

Okla., Oklahoma City — State Highway Dept. let contract to St. Louis Structural Steel Co., at \$19,525 for bridge over North Canadian river.

Okla., Tulsa—Tulsa County will invite bids for 13 concrete culverts and drainage open-

ings and 3 steel bridges; cost \$11,876.51. Address County Comms.

N. C., Halifax—North Carolina State Highway Comsn., Raleigh, N. C., let contract to A. C. House, Weldon, N. C., at \$10,536.60 to build bridges in Halifax County; Project 601. (Lately noted inviting bids.)

Tenn., Greeneville—Greene County Bridge Comsn. let contract to John A. Steel, Jr., and O. T. Roehl, Knoxville, Tenn., jointly, to erect following reinforced concrete arch bridges: 100-ft. span over Camp Creek, 50-ft. span over Lick Creek, 40-ft. span over Jockey Creek, 35-ft. span over Gap Creek, 30-ft. span over Snapp's Ferry and 40-ft. span over Hartman Creek.

Tex., Abilene—Taylor County plans building bridge over Mulberry Creek on Highway No. 1; cost \$19,500; D. G. Hill, County Judge.

Tex., Bastrop — Bastrop County plans building 1340-ft. bridge over Colorado river on Highway 2-C; cost \$160,000; J. B. Price, County Judge; A. F. Mitchell, County Engr., Cameron, Tex.

Tex., Fort Worth—Tarrant County, John Roberts, Commr., will repair Nine-Mile bridge across Lake Worth; \$8,000.

Tex., Galveston—Galveston County let contract to H. T. Herkes, at \$7,000 to construct concrete box culverts and concrete retaining walls; C. C. Washington, County Engr. (Lately noted.)

Tex., Georgetown — Williamson County plans building bridge over San Gabriel river on Highway No. 2; cost \$36,000; rebuild bridge over Berry's Creek; cost \$34,188; F. D. Love, County Judge; R. A. Nichols, County Engr.

Va., Jonesville—Virginia State Highway Comsn., 116 S. Third St., Richmond, Va., will build steel and concrete bridge on Dry Creek on State Road No. 10 between Jonesville and Rose Hill in Lee County; Va. Project 122; bids until Nov. 9; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Bridge Construction.)

Va., Martinsville—Virginia State Highway Comsn., 116 S. Third St., Richmond, Va., will build steel and concrete bridge over Horse Pasture Creek and steel and concrete bridge over Mayo Creek; both on State Road No. 12 between Five Forks and Patrick county line in Henry County; Va. Projects 133 B and 133 C; bids until Nov. 9; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Bridge Construction.)

Va., Yuma—Scott County will construct A 124 ft. steel bridge over O'Possum Creek; 80-ft. low truss and two 21-ft. beam spans; bids opened Oct. 31. Address Supvrs, Gate City, Va.

Canning and Packing Plants.

Ala., Coden—Fig Farms, Jno. L. Rolson,

Prest., will erect cannery with sufficient capacity to care for 1,000 acres figs. (See Land Development.)

Ala., Prichard—Haas-Davis Packing Co., capital \$50,000, incptd. with Wm. O. Haas, Prest.; A. D. Davis, V.-P.; F. E. Haas, Secy.; consolidated A. D. Davis Packing Co., and Haas Bros. Packing Co.

Fla., Arcadia—United Growers & Distributors is reported to construct \$1,000,000 packing plant for fruit; contemplates erecting plant to utilize culls.

Fla., DeLand—Prepared Fruit Co., Orlando, Fla., will establish plant to mf. grape fruit and orange marmelade, etc.; Geo. D. Moffatt, interested.

Fla., Pensacola—Brockman Packing Co., Henry Brockman, Prest., Foley, Ala., will establish packing plant; secured building.

Ga., Franklinton, (P. O. Drybranch)—R. L. Dowling Co., Columbus, Ohio, acquired R. F. Willingham's plant; will enlarge; increase daily capacity from 50,000 to 150,000 cans fruit and vegetables; C. A. Cheatham, in charge.

Ga., Savannah—W. J. Walker plans establishing cannery and mfg. plant for cane syrup. (See Machinery Wanted—Canning Machinery.)

Tenn., Centerville—R. E. Shouse & Co., organized with S. L. Whitson, Treas.; R. E. Shouse, Mgr.; will establish plant to cure hams. (Lately noted.)

Tenn., Watertown—Commercial Club, J. R. Smith, Prest., interested in organizing \$100,000 company to establish packing plant.

Va., Norton—Norton Packing Co., S. A. McCluen, Secy.-Treas., is erecting plant. (Lately noted incptd.)

W. Va., West Romney, (P. O. Vanderlip)—Tas-Te Fruit & Canning Co., until Dec. 1, 1921, 191 Market St., Paterson, N. J., after Dec. 1, Romney, W. Va., organized with Paul R. Fredericks, Prest., Treas. and Gen. Mgr.; Walter H. Bloomer, V.-P. and Secy.; establish plant to can fruit and vegetables; daily output first season, 10,000 doz. pts and 5,000 doz. qts.; also fresh fruits in boxes, crates, barrels, etc.; install paring machines; pitters; stave mill; wood-working machinery. Lately noted under Romney, W. Va. incptd., capital \$100,000. (See Machinery Wanted—Paring Machines; Pitters; Stave Mill; Wood-Working Machinery; Tanks; Heating Equipment.)

Clayworking Plants.

Mo., Columbia—Clay Products—Edwards Brick Co., St. Louis, Mo., capital \$50,000, reorganized to establish plant to mf. clay products; S. E. Cullom, Ceramic Engr., St. Louis, in charge.

Coal Mines and Coke Ovens.

Ala., Mobile—Anderson-Hall Coal Co., incptd. with Nick Andrews, Prest.; Archie Hall, Secy.

Ga., Savannah—Chatham Coal & Coke Co., capital \$25,000, incptd. by O. C. Bell, Jr., W. W. Williamson and J. B. Glover.

Mo., Hibernia, P. O. Holt Summit—Central Missouri Coal & Mining Co., 314 Central Trust Bldg., Jefferson City, Mo. (lately noted incptd., capital \$33,000), organized with Gene

Ewing, Prest.; John McManus, Secy.-Treas. will develop 600 acres coal land, daily capacity 10 to 12 cars; install \$75,000 mining mch., including boilers, engines, conveyors, pumps; build railroad both narrow and standard gauge. (See Machinery Wanted—Mining Machines; Railroad Equipment; Boilers; Engines.)

W. Va., Burch—Pigeon Creek Mining Co., capital \$100,000, inctpd. by K. S. McClanahan, Burch; J. R. Hatcher, W. J. Elliott, both Princeton, W. Va.

W. Va., Shinnston — Carrado-Fairmont Coal Co., Connellsville, Pa., capital \$500,000, inctpd. by G. Carrado, H. M. Kephart and T. B. Donnelly.

Cotton Compresses and Gins.

Mo., Caruthersville—Union Gin Co., will rebuild cotton house, recently burned.

Okla., Lindsay—Chickasha Cotton Oil Co., J. B. Boone, Mgr., plans rebuilding ginnery burned at loss of \$20,000.

S. C., Pageland—J. E. Agerton will rebuild cotton ginnery recently burned.

Tex., Corpus Christi—F. V. Arnim will construct reinforced concrete ginnery with 120 bales daily capacity; install machinery.

Drainage Systems.

Ky., Greenville—Muhlenburg County Drainage Commrs. will construct drainage ditch; 105,067.7 cu. yds. excavation, clearing 65.83 acres of right way, 3 bridges; estimated cost \$33,990.84; bids until Nov. 15; later contemplate constructing ditch with 162,000 cu. yds. excavation. (See Machinery Wanted—Ditch.)

Miss., Greenwood — Ellsberry Drainage Dist., W. T. Loggins, Prest., Leflore County will construct 1.28 mi. canal; 26,806 cu. yds. excavation; bids until Nov. 10; Eli Abbott, Jr., Engr. (See Machinery Wanted—Drainage.)

Tenn., Jackson—Madison County Commrs., contemplate establishing Clover Creek Drainage Dist. No. 11; construct about 4½ mi. drainage system; reclaiming low lands along or near Clover Creek and its tributaries; J. A. Thompson, Clk. County Court; C. E. Pigford, Atty.

Tex., Beaumont—Jefferson County Commrs. of Drainage Dist. No. 6 will construct following drainage ditches, North fork of Taylor's Bayou and its laterals, Pevito Bayou, Willow marsh, Burels gulley and Ditch No. 17; total excavation 2,107,142 cu. yds.; bids until Nov. 15; C. L. Sherer, Drainage Engr. Lately noted. (See Machinery Wanted—Drainage.)

Tex., Dallas—Dallas County Bois d'Arc Island Levee Dist. Commrs. plans to complete reclamation work; propose \$225,000 bond issue.

Tex., Victoria—Victoria County Commrs. contemplate establishing levee district, to reclaim about 6000 acres land; J. G. Johnston, County Surveyor.

Electric Plants.

Fla., Green Cove Springs—City will extend electric light and water plants; construct sewers; pave streets; voted \$150,000 bonds. Address The Mayor. (Previously noted may vote.)

Fla., Jacksonville—City Comsn. contemplates installing lighting system in Hemming Park.

Fla., Lake Worth—City, Alex. Drake, Mayor, plans increasing electric light plant capacity; install larger engine; Ward Randolph, City Engr.

Ky., Carrollton—City, J. E. Gullion, Mayor,

plans operating and maintaining light and water plant; vote Nov. 8 on \$22,000 bonds.

Ky., Falmouth—City will improve electric light plant and water-works; vote Nov. 8 on \$15,000 bonds. Address The Mayor.

La., Columbia—City sold \$30,000 electric light and water-works bonds. Address The Mayor.

Mo., Crane—J. P. Cantrell Oil Co. plans erecting electric light and ice plant.

Mo., Independence—City issued \$35,000 electric light bonds. Address The Mayor.

Mo., Osceola—H. O. Smith, Springfield, Mo., is reported to construct \$150,000 power plant, dam, docks, etc., at proposed summer resort on Osage River.

Mo., St. Louis—St. Louis Lead & Oil Works, International Life Bldg., let contract to Gillespie & Daly, International Life Bldg., to construct 1-story 47x27 and 22x18 ft. addition to power plant.

N. C., Pittsboro—City, B. Nooe, Mayor, let contract to Moncure Mfg. Co., Moncure, N. C., to construct brick sub-station for electric plant; install machinery to carry current from developing plant to city. Lately noted Chamber of Commerce interested. (See Machinery Wanted—Transmission Equipment.)

Tex., Dallas—Hardy Light Co., capital \$10,000, inctpd. by J. V. Hardy, W. A. Boatman and W. F. Carter.

Tex., San Antonio—Texas Central Power Co., capital \$1,000,000, inctpd. by R. W. Morrison, Jas. L. Shepherd, Jr. and Y. D. Mathes.

Tex., Vernon—City Commrs. plans establishing electric lighting and ice plants; contemplates extending present system.

Tex., Wortham—City will install electric light plant; vote Nov. 7 on bonds; Engineering Service Co., Conslt. Engrs., Dallas, Tex.

Fertilizer Factories.

Fla., Tampa—Atlantic Coast Line R. R., J. E. Willoughby, Ch. Engr., Wilmington, N. C., is constructing 400-ton capacity phosphate elevator; loading capacity 8,000 tons in 20 hours.

Md., Baltimore—Virginia & Carolina Chemical Co., S. D. Greenshaw, Secy.; P. C. Hoffman, Ch. Engr.; all 11 S. 12th St., Richmond, Va., will erect 500x200x140 ft. high fertilizer plant.

Tenn., Vestal, P. O. Knoxville—Knoxville Fertilizer Co., Jas. W. Dean, Secy.-Treas., let contract to Foundation Co., New York and Atlanta, Ga., at \$200,000, to construct 50,000-ton capacity acid phosphate plant; 360x154 ft. structural steel construction; let contract for crane to Shepherd Electric Crane & Hoist Co., Montour Falls, N. Y.; Manley & Young, Engrs.-Archts., 814 W. Hill Ave., Knoxville. (Lately noted.)

Flour, Feed and Meal Mills.

Ga., Forsyth—F. T. Bridges, H. H. Hardin, S. Rutherford and A. W. Bramblett interested in erecting 12,500-bu. capacity grain elevator.

Ga., Milner—P. W. Ethridge will rebuild roller mill recently burned at \$10,000 loss.

N. C., Pittsboro—Chamber of Commerce, Colin G. Shaw, Secy., interested in establishing roller mill.

Okla., Hammon—Hammon Mill & Grain Co., capital \$50,000, inctpd. by A. F. Sullins, E. G. Commons; both Hammon; W. L. Hutcherson, Oklahoma City.

Okla., Oneta—Farmers' Elevator Co., capital \$10,000, inctpd. by W. D. Kelley, Oneta; J. P. Bennett, Coweta; H. M. Ware, Broken Bow; all Okla.

Foundry and Machine Plants.

Ala., Gadsden—Pipe-Agricola Pipe Co.,

Otto Agricola, Prest., let contract to erect 100x412-ft. plant, fireproof, steel construction; equipment purchased. (Lately noted to rebuild burned plant.)

Md., Baltimore — Machine Shop, etc. — Christhill & Ensey, Gen. Contrs., Munsey Bldg., will erect 60x165-ft. machine shop and office building, 1 story, metal construction; purchased site.

S. C., Columbia—Repairing—Gibbs Machinery Co. will install electric drive mch. for the repairing of cotton gins, etc.

W. Va., Nitro—Machine Shop, etc.—E. P. Bailey Co. reported to erect 1 story foundry and machine shop, with equipment; costing \$100,000.

Gas and Oil Enterprises.

Ark., El Dorado—Foster Petroleum Co., capital \$70,000, inctpd. by Frank A. Foster, J. A. Crawford and J. Zeppa.

Miss., Canton—Madison County Oil & Development Co., capital \$20,000, inctpd. by W. H. Powell and others.

Okla., Muskogee—Petroleum Producing Co., capital \$100,000, inctpd. by L. P. Chalmers, A. F. Tucker; both Muskogee; Jno. A. Sheppard, Tulsa, Okla.

Okla., Okmulgee—Viersen Oil & Gas Co., capital \$20,000, inctpd. by Sam K., R. W. and A. A. Viersen.

Okla., Oklahoma City—Pacific Royalty Co., capital \$1,000,000, inctpd. by E. E. Aldridge, M. S. Denio and Geo. Arthur.

S. C., York—Simrill Oil Co., inctpd. with J. Ross Cannon, Prest.; W. J. McCarter, V.-P.; Frank M. Simrill, Secy.-Treas.

Tex., Brenham—Brenham Oil Co. increased capital from \$30,000 to \$50,000.

Tex., Denison—Peter Oils, capital \$200,000, inctpd. by E. E. Peter, H. A. Jones and J. T. Suggs.

Tex., Fort Worth—Cremer-Martin Co., capital \$150,000, inctpd. by L. J. Wardlaw, J. T. Tucky and R. T. Cremer.

Tex., Graham—Spoons & Varble, capital \$100,000, inctpd. by Leslie Spoons, W. N. Varble and W. H. Hodnett.

Tex., Laredo—Pipe Line—Texas-Pata Pipe Line Co., capital \$100,000, inctpd. with O. W. Killam, Prest., plans constructing pipe line from Mirando oil field to Texas-Mexican R. R. in Webb County, distance of 15 mi. (Supersedes recent item.)

Tex., Orange—Humble Oil & Refining Co., will re-establish pumping plant, and rebuild derrick, etc., recently burned.

Tex., Waco—Refining—Waco Refining Co., W. A. Rogers, Prest., will enlarge refinery.

W. Va., Fairmont—Mountain State Oil & Gas Co., \$50,000, inctpd. by Ernest McCoy, B. F. Evans, H. H. Carr.

W. Va., Hamlin—Hamlin Gas Co., capital \$35,000, inctpd. by Alfred Howell, J. E. McClay and Exa Brafman.

Ice and Cold-Storage Plants.

Ala., Ft. Payne—Ft. Payne Ice Co., capital \$10,000, organized with J. B. Harrison, Prest.; G. A. Wetherly, Secy.-Treas.; A. A. Miller, Mgr.; will erect ice plant, construction by owners; install \$10,000 ice making mch. Lately noted. (See Machinery Wanted—Ice Plant.)

Fla., West Palm Beach—Anarectic Ice Co.,

J. E. Bender, Prest. and Gen. Mgr., will occupy 1 story, 100x60-ft. ice plant building, cement block construction; capacity 35 tons per 24 hrs.; erected by H. C. Daniels.

Ga., Columbus—Buck Ice Co., T. B. Buck will erect 150x150-ft. ice plant; raw water system; 30 ton capacity; mchy. purchased.

Md., Baltimore—American Ice Co., W. H. Oler, Mgr., 309 Calvert Bldg., will expend \$18,000 on alterations to plant; construction by owners; install electric driven ice machines and pumps, all purchased; daily capacity 200 tons; Leslie C. Wier, Archt. and W. S. English, Const. Engr., care of American Ice Co.

Mo., Crane—J. P. Cantrell Oil Co. contemplates erecting ice and electric light plants.

Mo., Kansas City—City Ice Co., 21st and Campbell Sts. will erect 42x80-ft. ice plant; estimated cost \$75,000; G. Carmen, Archt., Gumbell Bldg.

Mo., Salisbury—Sanitary Ice & Supply Co. will erect plant addition; invites bids; S. R. Petry, Engr.

N. C., Tarboro—Red Gum Veneer Co., W. B. Henry will erect 40x100 ft. cold storage plant, cold air circulation storage, capacity 10,000 bbls.; construction by owners. Lately noted. (See Machinery Wanted—Cold Storage Plant.)

Tex., Vernon—City contemplates establishing ice manufacturing and electric light plants. Address The Mayor. (See Electric Plants.)

Va., Lynchburg—Standard Ice Co., E. C. Ivey, Prest., will enlarge plant, increase daily capacity to 110 tons and storage capacity to 2,800 tons.

Irrigation Systems.

Tex., Corpus Christi—Nueces County Water Improvements Dist. No. 3, A. A. Thompson, Secy. Board Directors will vote Nov. 19 on bonds for irrigation system and water plant.

Land Development.

Ala., Birmingham—City purchased site; will develop for park. Address The Mayor.

Ala., Coden—Fig Farms, inctpd. with Jno. L. Rolson, Prest.; acquired 1,000-acre site; develop for fig growing; will erect cannery.

Ala., Florence—Lakeview Heights, inctpd. with Maj. W. S. Winn, Prest.; C. W. Ashcraft, V.-P.; J. Fred Johnson, Jr., Secy.-Treas.; has 118-acre site; plans establishing residential suburb.

Fla., Daytona—G. M. Randall, Box 641, has 160-acre site; will establish farming agricultural colony; plans making fifteen 10-acre farms. Lately noted. (See Machinery Wanted—Stump Pullers; Tractors; Farm Machinery; Drilling Machinery; Building Machinery.)

Fla., Jacksonville—City plans expending \$5,000 for park in Lackawanna Dist. Address The Mayor.

Fla., West Palm Beach—City will improve parks, sewers, streets and sidewalks; plans issuing bonds. Address The Mayor.

Fla., West Palm Beach — Palm Beach Groves & Nursery Co., capital \$100,000, inctpd. with A. E. Parker, Prest.; J. B. McDonald, V.-P.; R. A. Conkling, Secy.-Treas.; A. L. Swanson, Gen. Mgr.

La., Leighton, P. O. Thibodaux—Leighton Plantation, A. J. Price, Prest. and Gen. Mgr.; purchased 2,000-acre site; is develop-

ing for sugar cane growing, cattle raising and dairying; approximate cost \$150,000. (Lately noted inctpd., capital \$150,000.)

Md., Baltimore—Cedar Hill Cemetery, 808-A American Bldg., capital \$50,000, inctpd. by Nathan P. Pitcher, Wm. R. Ryan and Clyde H. Wilson.

Md., Baltimore—Edgewood Developing Co., 3501 Forest Park Ave., inctpd. by Samuel C. Coolling, Alfred T. Edell, and Jas. T. Mathis, 3300 Powhatan Ave.

Miss., Rounsaville—Greene Creek Land Co., capital \$25,000, inctpd. by L. C. Rounsaville and others.

N. C., Charlotte—Graham Heights Land Co., McCoy Moretz, Prest., 10 E. 4th St., will develop 3000-acre site; lay water and sewer lines; erect homes; bids until Jan. 1, 1922; C. G. Hubble, Engr. Lately noted under Graham, N. C., inctpd., capital \$125,000. (See Machinery Wanted—Water-Works.)

N. C., Durham—City, R. W. Rigsby, Mgr., secured 90-acre site; will develop for cemetery.

N. C., Raleigh—Herolean Farm Co., capital \$1,000,000, inctpd. by R. C. Remick, Wilmington; Matt H. Allen and W. F. Taylor; both Goldsboro, N. C.

N. C., Winston-Salem—City will establish parks and playgrounds; voted \$100,000 bonds; Jas. G. Hanes, Mayor. (Lately noted to vote.)

Va., Petersburg—City, City Mgr. Brownlow, plans establishing Lee Memorial Park; has several acres; will improve with sidewalks, roadways, etc.

Va., Roanoke — City purchased Eureka Circle; will develop for park. Address The Mayor.

Lumber Manufacturing.

Tex., Colmesneil—Joyce Bros., Chicago, Ill., purchased 40,000 acres timber land; will develop.

Tex., Dallas—McNees Lumber Co., inctpd. by J. L. McNees and K. W. Holbert.

Tex., Waxahachie — Ellis County Lumber Co., capital \$25,000, inctpd. by D. W. Burchfield, J. W. and T. T. Blakley.

Va., Tazewell — Clinch Valley Lumber Corp., capital \$250,000, inctpd. with Leon Isaacson, Prest., Brooklyn, N. Y.; E. L. Lambert, Secy., Ironton, O.

Metal-Working Plants.

Md., Baltimore—Sheet Metal—Lyon, Conklin & Co., 13 Balderson St. let contract to George B. Monmonier & Son, 1711 McCulloh St. to erect 1 story, 230x134-ft. steel building and 4 story 66x75 ft. brick building; estimated cost \$75,000. (Previously noted to erect.)

Mo., St. Louis—Automobile Locks—Johnson Automobile Lock Co., Joseph Hoffman, Secy. and Gen. Mgr., purchased building at 4121 Forest Park Blvd.; moving plant from Chicago.

S. C., Charleston—Novelties, etc.—Dixie Tool & Novelty Co., capital \$30,000, inctpd. with V. L. T. Cooper, Prest.; O. J. Muller, Secy.-Treas.

Mining.

Ala., Flomaton—Sand and Gravel—Escambia Sand & Gravel Corp., C. H. Harrell, V. P., will install gravel dredging plant.

Fla., Interlachen—Sand and Gravel—Interlachen Sand & Gravel Co. (previously noted inctpd., capital \$30,000) organized with Geo. E. Welch, Prest.; J. H. Wylie, Secy.-Mgr.; have equipment; daily output 500 cu. yds. sand and gravel.

Md., Howard County — Feldspar, etc. — Mineral Potash Corp., 712 Equitable Bldg., Baltimore, Md. (lately noted inctpd., capital \$750,000) organized with Louis A. Hazard, Prest.; George A. Brownley, Secy.-Treas., will erect \$50,000 plant, mill construction; install \$50,000 mchy. for grinding feldspar.

Miscellaneous Construction.

Ala., Gadsden—Dam—J. W. Williams let contract to Coin & Williams to construct 12x120-ft. cement dam at mill.

D. C., Washington—Canal—Chesapeake & Ohio Canal Co., Geo. L. Nicholson, Mgr., 1079 31st St., N. W., will make improvements, construct several concrete waste-weirs and other necessary repairs.

Fla., Fernandina — Laboratory — Florida Terminal Co. will erect main building for laboratory and office, concrete and steel construction; also construct building for grinding and crushing mchy., motors, experimental furnace, etc.; Dr. Ernest Molnar, Chief Chemist.

Fla., Jupiter—Inlet—Palm Beach County Comms., West Palm Beach, Fla., will vote Oct. 27 on \$100,000 bond to construct inlet from ocean to inland waters.

Fla., Orlando—Incinerator—City contemplates installing additional incinerator. Address The Mayor.

Fla., Tallahassee — Monument — Mrs. J. Stuart Lewis, Chrmn. of Committee and others let contract to Clark Monument & Stone Co., Jacksonville, Fla., to erect monument on battleground at Natural Bridge; Legislature appropriation \$5,000.

Mo., Osceola—Docks, etc.—H. O. Smith, Springfield, Mo., reported to construct \$150,000 dam, power plant, docks and boats for proposed summer resort on Osage River.

Okla., Muskogee — Cleaning — Parisian Cleaning Co., Wm. Sendelback, 316 Court St., let contract to Dickman & Nieman to erect 48½x195 ft.; partly fireproof and ordinary construction; \$20,000.

Tenn., Chattanooga—Moving Picture Films — Hanna Lee Production Co., capital \$50,000, inctpd. by P. H. Harrell, T. J. Davis and M. L. Mulkey.

Tenn., Knoxville — Alarm System — City contemplates installing combination telephone and alarm system; N. B. Kuhlman, City Commr.

Tenn., Knoxville — Publishing — Scripps-McRea Publishing Co., 47 W. 37th St., leased site at 125 Gay St., will remodel for publishing plant; install mchy. all purchased.

Tenn., Nashville—Swimming Pool, etc.—Cascade Corp., O. F. Whittle, 2015 Linden Ave., will erect frame and stucco building with swimming pool 85x200 ft. also dancing pavilion and cafe; bids until May 1, 1922; install filter sterilizer and circulating pumps; S. M. McMurray, Engineering Co., Archt. and Const. Engr. (Lately noted.)

Tex., Galveston—Ratproofing Pier—Southern Pacific Terminal Co., H. M. Lull, Chief Engr., Houston, Tex., plans ratproofing Pier B, work includes replacing 270,000 sq. ft. plank floor and wooden sleepers with concrete floor, 6637 lin. ft. timber bulkhead with concrete bulkhead also relaying water mains; approximate cost \$150,000. (Lately noted.)

Tex., Galveston—Storage Bins—Texas Gulf Sulphur Co. will erect two, 57x600-ft. sulphur storage bins at pier 35; concrete and steel construction; capacity 20,000 tons; approximate cost \$180,000.

Tex., Rockport — Breakwater — City will construct breakwater, voted \$50,000 bonds; Fred M. Percival, County Engr. (Previously noted.)

Va., Raleigh—Heating Plant—State Hospital, Dr. Albert Anderson, Supt., plans extending heating plant; Wiley & Wilson, Engrs., Peoples National Bank Bldg., Lynchburg, Va.

W. Va., Huntington—Terminals—City contemplates improving terminal facilities. Address The Mayor.

Miscellaneous Enterprises.

D. C., Washington—Dairy—Wise Bros., 3206 N St., N. W., let contract to H. B. Davis, 1311 G St., N. W., to erect 2 story addition to dairy plant; A. P. Clark, Jr., 816-14th St., N. W.

Ga., Macon — Transportation — Georgia Transportation Co., capital \$25,000, inceptd. by A. R. Spies, H. A. Chester and A. M. Spies, Jr.

Ky., Bowling Green — Hatchery — F. G. Jackson, Columbus, O., contemplates establishing hatchery, annual capacity 125,000 chicks; W. H. Rogers, County Agent.

Ky., Louisville—Laundry—Model Family Laundry, capital \$20,000, inceptd. by Fred H. Wilson, Fred and C. W. Seitz.

Ky., Louisville — Construction — Model Home Construction Co., capital \$12,000, inceptd. by Herbert R. Kohler, Frank J. L. Morant and E. M. Coter.

Md., Baltimore—Dairy—Old Homestead Dairy Co., Francis A. Lazenby, Prest., 414 Key Highway will erect 2 story plant; Frederick E. Beall, Archt., 306 St. Paul St.

Md., Baltimore — Engineering — Fowler & Farley Engineering Co., capital \$100,000, inceptd. by Claude Thomas Farley, 1650 Warwick Ave., Arthur R. Kasson and E. Alfred Fowler.

Md., Baltimore—Printing—Linotype Composition Co., 223 N. Holliday St., inceptd. by Robert W. Williams, George W. Evans and Edward J. Bathon.

Mo., St. Louis—Film Exchange—Fox Film Corp., 55th St. and 10th Ave., New York City, leased part of 2 story 85x133-ft. concrete building to be erected by Nat Koplan, 5349 Pershing Ave., St. Louis; William Fried, Archt. (Previously noted.)

N. C., Greensboro—Buildings Materials—Piedmont Building Material Co., capital \$100,000, inceptd. by W. McC. Neal and S. W. Immon.

N. C., Greensboro—Construction—S. W. Immon Construction Co., capital \$100,000, inceptd. by W. McC. Neal and S. W. Immon.

N. C., Shelby—Laundry—J. E. Sanders and A. P. Liebig, Middlesboro, Ky., purchased Shelby Steam laundry, contemplate plant improvements.

S. C., Greenville—Laundry—Ideal Laundry, J. W. Powell, Propr., let contract to Perkins Construction Co., 110½ W. Coffee St. at \$15,000 to erect 2 story 50x75-ft. laundry, boiler house and dry cleaning plant to be built later; install laundry and dry cleaning mchy. Supersedes recent item. (See Machinery Wanted—Laundry Machinery, etc.)

S. C., Gaffney—Laundry—Gaffney Steam Laundry leased by B. M. Tinsley, Spartanburg, S. C. and G. H. Parker, Union, S. C.; plans improvements, etc.

Tex., Dallas—Printing—Majestic Printing Co., inceptd. by G. R. Bryant, M. P. Goodman and Roland Lumpkin.

Tex., Dallas — Engineering — Engineering Service Co., inceptd. by J. H. Brillhart, J. D. Fowler and S. E. Gillespie.

Tex., Dallas — Fire Apparatus — Southern Fire Apparatus Corp., capital \$40,000, inceptd. by R. C. Barbee, Henry Grosman and J. E. Blaine.

Tex., Eagle Pass—Laundry—J. H. Berkley,

San Antonio, Tex., acquired Eagle Pass Steam Laundry, will repair, additional mchy. purchased; E. C. Morgette, Mgr., Dallas, Tex.

Tex., Houston—Transportation—Fred V. Burns Co., inceptd. by Fred V. and M. B. Burns, Ben Blumberg.

Va., Lynchburg—Electrical, etc.—Wachter-Possin Co., capital \$25,000, inceptd. by George A. Possin, Prest.; L. C. Wachter, Secy.-Treas.

Va., Richmond — Cleaning and Dyeing — Ashby B. Pyle will erect 2 story cleaning and dyeing plant, brick construction; estimated cost \$17,500.

Va., Roanoke—Moving Picture Studio—Roanoke Moving Picture Co. will erect stucco studio, purchased 4½ acres site.

W. Va., Charleston—Contracting—Loescher Co., capital \$25,000, inceptd. by Peter Loescher, George M. Casey and A. S. Thorne.

W. Va., Shinnston—Transportation—Fuller Transit Co., capital \$10,000, inceptd. by Delmer L. Fuller, Earl Springer and T. M. Simon.

Miscellaneous Factories.

Ala., Montgomery—Creamery—Mellilotus Creamery Co., 121 Bell St., organized with W. L. Lancaster, Prest.; B. F. Miller, V-P. and Mgr.; J. T. Fowler, Jr., Secy.-Treas.; has plant to mfr. ice cream and butter; contemplates installing machinery to mfr. cheese.

Ala., Tuscaloosa—Paper—F. G. Blair interested in organizing company to establish 1,500,000 plant to mfr. print paper; daily output 50 tons; also bond and kraft paper. (Lately noted Chamber of Commerce interested.)

Ark., Fort Smith—Molasses—Best-Clymer Mfg. Co., Fred Norton, Supt., will rebuild plant burned at \$35,000 loss.

Ark., Little Rock—Bottling—Red Crown Water Co., 11th and Cumberland Sts., is erecting 90x50 ft. brick and concrete building; install machinery; let contract to drill deep wells at plant.

Fla., Orlando — Paper — Industrial Manufacturers Co., Geo. A. Weaver, Prest., Indianapolis, Ind., interested in establishing \$2,000,000 paper plant.

Fla., Pensacola—Awnings, etc.—A. L. Soderquist & Co., Jacksonville, Fla., contemplates establishing branch plant to mfr. awnings, tents, etc.; Ernest V. Soderquist, Gen. Mgr., Savannah, Ga.

Fla., Tallahassee—Ice Cream—Leon County Milk Co., purchased plant of Purity Milk Co. of Jacksonville, in this city; will install machinery; mfr. ice cream.

Ga., Atlanta—Rubber—Diamond Holfast Rubber Co. will expend \$35,000 to construct factory building; 1-story 240x80 ft.; concrete construction; composition roofing; bids opened; A. Ten Eyck Brown, Archt., Forsyth Bldg.

Ga., Atlanta—Chemicals—Atlanta Chemical Co., capital \$25,000, inceptd. by Arthur and Byron Brooke and J. F. Pursley.

Ga., Columbus—Coffee—Southern States Coffee Co., inceptd. by J. W., M. Z. and A. P. Bugg.

Ga., Savannah—Syrup—W. J. Walker plans establishing mfg. plant and cannery for cane syrup. (See Machinery Wanted—Syrup Machinery.)

Ky., Ashland — Ice Cream — Imperial Ice Cream Co., W. M. B. Sine, Director, Clarksburg, W. Va., will erect fireproof building; bids opened; install ice cream and refrigerating machinery to mfr. ice cream, dairy products, etc.; bids until Nov. 10; McCor-

mick Co., Archt., Pittsburgh, Pa. Lately noted. (See Machinery Wanted—Ice Cream Machinery; Refrigerating Machinery.)

Ky., Lexington—Bakery—Lexington Bakery Co. will erect addition to plant; L. K. Frankel, Archt.

La., New Orleans — Brooms — Louisiana Comsn. for the Blind, S. J. Shwartz, Prest., plans erecting factory building, display room and work shop; mfr. brooms.

Md., Baltimore—Toilet Articles—Hanover Specialty Co., 210 E. Lexington St., capital \$10,000, inceptd. by Harry L. and Emily S. Bennett and Dixie B. Gwynn.

Md., Baltimore—Asphalt Roofing—McHenry-Millhouse Mfg. Co., J. L. Kittinger, Gen. Mgr., South Bend, Ind., and Fulton, N. Y., will establish plant at Canton; purchased Electrolytic Zinc Co.'s plant, at 1200 S. 18th St.; will remodel and enlarge; install machinery to mfr. roll roofings, building papers, roof-coating paints, etc.

Md., Baltimore — Drugs, etc. — Hynson, Westcott & Dunning, Charles and Franklin Sts., plans erecting \$100,000 ordinary fireproof building; Howard Sill, Archt., 11 E. Pleasant St. (Lately noted.)

Md., Baltimore — Rubber, etc. — General Packing & Rubber Co., 28 S. Charles St., capital \$10,000, inceptd. by Zachary R. Lewis, Eben J. D. Cross and E. Ridgely Simpson.

Md., Baltimore—Pine Products—Pine Products Corp., Maryland Casualty Bldg., capital \$700,000, inceptd. with W. W. Wilder, Prest., Citizens Trust Co. Bldg., Savannah, Ga.; Wayne Cadwallader, V-P., 90 West St., New York; R. Lancaster Williams, Treas., Munsey Bldg., Baltimore; B. I. Morris, Secy., Savannah, Ga.

Md., Hagerstown—Silos—Quality Mfg. Co., Prospect and North Sts., capital \$15,000, inceptd. by Stephen F. F. Knepley, Hannah Chubb and Wm. J. Colfelt.

Miss., Biloxi—Pine Products—Southern Pine Products Co., capital \$1,000,000, inceptd. by D. J. and E. C. Gay; both Biloxi; J. O. Gillespie, Gulfport, Miss.

Miss., Pascagoula—Bakery—Jules Morlet purchased Tony Cassanova's plant; will improve.

Mo., Moberly—Shoes—Brown Shoe Co. plans enlarging plant; increase daily production from 4,000 to 6,000 pairs.

Mo., St. Louis—Elastic Belts, etc.—Climax Specialty Co., E. F. Georges, Gen. Mgr., 915 Pine St., leased 4th floor of building, providing 8,000 sq. ft. floor space; mfr. elastic belts, children's wear, etc.

N. C., Kings Mountain—Exterminator—Boll-We-Go Co., capital \$50,000, inceptd. with Beverly Patterson, Prest.-Treas.; H. N. Moss, V-P. and Secy.

N. C., La Grange—Overalls—Merchants' Mfg. Co., J. P. Joyner, Secy.-Treas., will establish plant to mfr. overalls; install sewing machines and fixtures; approximate cost \$2,500; daily output 50-doz. prs. overalls and work shirts. (Lately noted.)

Okla., Enid—Clothing—Union Garment Mfg. Co., 107½ S. Grand Ave., organized with R. A. Clappitt, Prest.; C. O. Doty, Secy.-Treas.; C. W. Mastin, Mgr.; leased brick building; purchased \$8,200. machinery to mfr. overalls, trousers and shirts; daily capacity 100 doz. (Lately noted inceptd., capital \$20,000.)

Okla., Picher—Shirts—Picher Advertising Club, E. C. McWilliams, Secy., interested in establishing plant to mfr. shirts.

S. C., Columbia—Chemical Products, etc.—

Sana-Chem. Co., capital \$100,000, incptd. by J. S. Hammack, E. H. Salmon and Wm. Anderson Clarkson.

S. C., Columbia—Window Shades—Brook Springless Window Shade Co. increased capital from \$10,000 to \$35,000.

S. C., Florence—Creamery—Colonial Creamery Co., let contract to Haynsworth & Lawton, at \$10,000 to construct 1-story 93x45 ft. semi-fireproof factory building; machinery purchased; daily churning capacity 5,000 lbs. butter. (Supersedes recent item.)

S. C., Spartanburg—Cottonseed Products—Caldwell & Co., Ralph M. Caldwell, Secy.-Mgr., will erect 65x21 ft. mill construction building.

Tenn., Chattanooga—Shoes—Southern Shoe Mfg. Co., capital \$50,000, incptd. by L. L. Gwin, Taylor Durham and Louis Morris.

Tex., Dallas—Drugs—Federal Reserve Drug Co., capital \$10,000, incptd. by Ridgell Keller, R. V. Rucker and W. G. Miller.

Tex., Dallas—Bottling—Lyons Bros. Co., W. J. Lyons, Prest.-Owner, is establishing plant to bottle vinegar and blueing. (See Machinery Wanted—Bottling Machinery; Bottles.)

Tex., Dallas—Chemical Products—Superior Products Co., organized to mfr. fire extinguishers and other chemical products; acquired Southern States Chemical Co.'s plant.

Tex., Houston—Candy—Congress Candy Co., capital \$30,000, incptd. by L. J. Strej Mrs. L. L. Strej and C. H. Elliott.

Tex., Houston—Chemicals—Phoenix Chemical Works, capital \$50,000, incptd. by Jno. Pfeiffer, E. J. Blunt and M. H. Webster.

Tex., Kingsville—Dairy Products—Dairy Products Co., increased capital from \$3,500 to \$20,000.

Tex., Waco—Creamery—G. W. Royalty, W. W. Woodson and E. S. Fentress plan erecting creamery. (Lately noted, R. W. Royalty interested.)

W. Va., Charleston—Cones—Victory Cone Co. increased capital from \$5,000 to \$10,000.

W. Va., Fairmont—Batteries—Mountain State Battery Co., capital \$25,000, incptd. by E. F. Van Gilder, Fairmont; Foster W. Wright, Helens Run, W. Va.; Earl Zuspan, Hutchinson, W. Va.

W. Va., Huntington—Imperial Ice Cream Co., W. M. B. Sine, Director, Clarksburg, W. Va., will erect fireproof building; bids opened; install ice cream and refrigerating machinery to mfr. ice cream, dairy products, etc.; bids until Nov. 10; McCormick Co., Archt., Pittsburgh, Pa.

Motor Cars, Garages, Tires, Etc.

D. C., Washington—Service Station, etc.—R. L. Taylor Motor Co., 14th. and F St., will erect 4 story 20x120-ft. service station, brick and concrete construction; Stearn & Tomlinson, Archts., Continental Trust Bldg.

Fla., Fort Pierce—Garage—Riverside Motor Sales Garage will enlarge building, install additional mchy.

Ga., Savannah—Garage—Reo Auto Sales Co., capital \$25,000, incptd. by J. R. Koerber, R. E. Thorpe and H. A. Silverstein.

Ky., Lebanon—Motors—Lebanon Motor Co., capital \$15,000, incptd. by J. N. Knumbles, J. J. and H. O. Cozatt.

La., Jeanerette—Garage—Beaulieu Motor Co. will erect 1 story garage building; invites bids; plans with F. W. Steinman & Son, 517 Kyle Bldg., Beaumont, Tex.

Md., Baltimore—Garage—City let contract to F. O. Singer, Equitable Bldg., to erect 1-story 58x58.6-ft. garage for Central Police Station.

Md., Chestertown—Garage, etc.—A. S. Turner & Son, 203 High St. let contract to Stavelly & Bowers, Lynch, Md. to erect 2 story 40x222-ft. public garage, show room, etc.; for heating and plumbing to W. C. Sutton, and electric lighting to F. Crouch, both Chestertown, Md.

Mo., St. Joseph—Garage—Grant Motor Co., 9th. and Felix St. let contract to Sam Hotchkiss, 18th. and Penn Sts. to erect 1 story and basement 120x140-ft. garage.

Mo., St. Louis—Garage—Plymouth Garage Co., 5909 Plymouth Ave. let contract to T. H. Ratz, 917 E. Pine St. to erect 1 story 80x75-ft. addition to garage; Wedemeyer & Nelson, Archts., Wainwright Bldg. (Previously noted to erect.)

N. C., Charlotte—Groom Motor Service Co., 720 Mint St., increased capital from \$25,000 to \$50,000; changed name from Convertible Oil Gauge Co.

N. C., Fairmont—Garage—Robeson Motor Car Co. will occupy 80x30-ft. brick garage brick construction; erected by A. C. Thompson.

N. C., Raleigh—Rawls Motor Co., C. H. Rawls, Mgr., let contract to W. B. Barrow, 304 Merchants National Bank Bldg., at \$38,000 to erect 2 story 51x210-ft. fireproof building, terra cotta and press brick, plate glass front, steel sash, steel beams, tin roof; H. P. S. Keller, Archt.

Okla., Pawhuska—Motors—Hudson-Essex Motor Co., capital \$50,000, incptd. by Martin Carriker, P. W. Sill and Lucille M. Chapman.

Okla., Woodward—Automobile—Woodward Auto Investment Co., capital \$10,000, incptd. by James R. H. Herod, L. E. Bouguet and C. R. Ludwick.

S. C., Charleston—Automobiles—Charleston Haynes Co., incptd. with E. C. Hesse, Prest.; R. B. Ingram, Secy.-Treas.

S. C., Greenville—Motors—K. S. Conrad Co., capital \$60,000, incptd. by K. S. Conrad, W. A. Harris and V. O. Garrison.

Tenn., Knoxville—Filling Station—Dixie Highway Service Station, capital \$10,000, incptd. by T. J. Cole, Carl T. Baum and M. O. Currier, Jr.

Tenn., Knoxville—Garage, etc.—Cherokee Motor Co. will erect 2 story 51x132-ft. and basement garage and 50x60-ft. display room, reinforced concrete, tile floor, marble trimmings, plate glass front, metal sash and composition roof; steam heat; Manley & Young, Archts. (Supersedes previous item.)

Tenn., Nashville—Automobile Parts—Southern Auto Parts Co., capital \$10,000, incptd. by Joe F. Poyner, W. M. Bell and S. H. Ellison.

Tex., Schertz—Motors—Schertz Motor Co., capital \$10,000, incptd. by John B. Molt, R. J. Blumberg and H. P. Thulemeyer.

Va., Lynchburg—Garage—Shanor Motor Service, capital \$30,000, incptd. with Edgar M. Shanor, Prest.; W. G. McClure, Secy.-Treas.

W. Va., Fairmont—Filling Station, etc.—Mountain State Oil & Gas Service Co., capital \$50,000, incptd. by B. F. Evans, and others; plans erecting 3 filling stations, first to be triangular ornamental building, covered driveway, install 4 pumps, etc.; Jones Nuzum, Archts.

W. Va., Fairmont—Service Station—Mountain State Battery Co., 225 Meredith St., capital \$25,000, organized with E. F. Van Gilder, Mgr.

W. Va., Fairmont—Service Station—Mountain State Oil & Gas Service Co. will erect 60x60-ft. service station, estimated cost \$10,000.

W. Va., Huntington—Automobile Accessories—Flat Top Auto Supply Co., capital \$100,000, incptd. by C. I. Leftwich, C. L. Van Zandt and H. O. Sheets.

W. Va., Montgomery—Garage—Brown's Garage Co., capital \$25,000, incptd. by L. Burke O'Neal, Montgomery; G. D. Brown, Gauley Bridge, W. Va.

Railways.

Okla., Vinita—Kansas & Oklahoma Railroad Co. is reported to have applied to the Interstate Commerce Commission for authority to complete a line from Vinita, Okla., to Caney, Kansas, 65 mi. of which 37 mi. were graded some time ago. O. P. Byers, Hutchison, Kansas, is president.

Railway Stations, Sheds, Etc.

Mo., St. Louis—St. Louis & San Francisco R. R., F. G. Jonah, Ch. Engr., let contract to Globe Construction Co., Chemical Bldg., to build 1 story 103x40-ft. machine shop.

Tex., Houston—Missouri, Kansas and Texas Ry., F. H. Ringer, Ch. Engr., St. Louis, Mo. let contract to H. D. McCoy, Clebourne, Tex. to construct 1 story 30x50-ft. machine shop.

Road and Street Construction.

Ala., Attalla—City let contract to Lasley Bros, Chattanooga, Tenn., at \$43,000 to pave Fourth St. and Fifth Ave.

Ala., Gadsden—City let contract to Lasley Bros, Chattanooga, Tenn., to pave streets, sidewalks, curb and gutters; \$143,500 available; Ernest Smith, Engr. (Lately noted inviting bids.)

Ala., Tusculumbia—State Highway Comsn., Montgomery, Ala., let contract to J. W. Gwin, Birmingham, Ala., for 14.67 mi. gravel road in Colbert County; cost \$138,518.78. (Lately noted inviting bids.)

Ark., Magnolia—Magnolia-McNeil Road Improvement Dist., W. R. Cross, Secy., will construct gravel finished highway; \$100,000; Parkes Engineering Co., Engr., Pine Bluff, Ark. (Lately noted.)

D. C., Washington—Dist. Comrs. will grade Albemarle St., N. W.; low bidder Wm. F. Cush.

Fla., Chipley—Washington County will sell \$100,000 bonds for road and bridge construction; C. B. Dunn, Chrmn. Bond Trustees Special Road and Bridge Dist. No. 1.

Fla., Green Cove Springs—City voted \$150,000 bonds to pave streets, construct sewers, extend water and light plant. Address The Mayor. (Previously noted contemplating.)

Fla., Green Cove Springs—Clay County sold road bonds to construct road from Green Cove Springs to West Tocol. Address County Commrs.

Fla., Starke—Bradford County voted \$550,000 bonds for construction of roads as follows: hard-surfacing main highway across county from northeast to southwest known as Jacksonville-Gainesville highway; cost \$300,000; also lateral roads, cost \$250,000. Address County Commrs. (Lately noted to vote.)

Fla., Titusville—Brevard County will grade drain and surface Section of State Aid Road No. 125 in Dist. No. 3; bids until Nov. 9; N. T. Froscher, Clk. Circuit Court. (See Machinery Wanted—Road Construction.)

Fla., West Palm Beach—City Coman. plans issuing bonds for street, sewer, sidewalk and park improvements.

Fla., West Palm Beach—Palm Beach County will vote Nov. 8 on bonds to construct roads in Lake Worth Drainage Dist. Address County Commrs.

Ga., Atlanta—City, J. N. Landers, Purchasing Agt. will pave Abilene, Belmont, DeSoto, Central and other avenues and streets; bids until Nov. 7. (See Machinery—Paving.)

Ga., Atlanta—City will sell \$83,500 street improvement bonds; J. R. Seawright, Chrmn. Finance Committee.

Ga., Savannah—Chatham County Commrs. let contract to Hutton Engineering & Contracting Co. to surface Dale Ave. with sheet asphalt; cost \$80,000.

La., Abbeville—Vermillion Parish let contract to Smith Bros., Alexandria, La., to grade and gravel roads; cost \$350,000; J. W. Billingsley & Co., Engrs., New Orleans, La. (See Machinery Wanted—Road Building Materials; Road Building Equipment.)

La., Alexandria—Rapids Parish let contract to Smith Bros., Alexandria, La., to grade and gravel roads; cost \$100,000; J. W. Billingsley & Co., Engrs., New Orleans, La. (See Machinery Wanted—Road Building Materials; Road Building Equipment.)

La., Arcadia—Bienville Parish let contract to Smith Bros., Alexandria, La., to grade and gravel roads; cost \$600,000; J. W. Billingsley & Co., Engrs., New Orleans, La. (See Machinery Wanted—Road Building Materials; Road Building Equipment.)

La., Coushatta—Red River Parish let contract to Smith Bros., Alexandria, La., to grade and gravel roads; cost \$80,000; J. W. Billingsley & Co., Engrs., New Orleans, La. (See Machinery Wanted—Road Building Materials; Road Building Equipment.)

La., Harrisonburg—Catahoula Parish let contract to Smith Bros., Alexandria, La., to grade and gravel roads; cost \$750,000; J. W. Billingsley & Co., Engrs., New Orleans, La. Supersedes recent item. (See Machinery Wanted—Road Building Materials; Road Building Equipment.)

La., Natchitoches—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La. will surface with gravel 10.53 mi. Natchitoches-Mansfield highway, Robeline to DeSoto Parish line; 8.81 mi. Natchitoches-Colfax highway, Grand Ecote to Saline Bayou; bids until Nov. 7. (See Machinery Wanted—Road Construction.)

La., Vidalia—Concordia Parish will sell \$50,000 road construction bonds; B. C. Brown, Prest. Police Jury.

Mo., Caruthersville—State Highway Dept., Jefferson City, Mo., will construct 2.386 mi. State road from Holland southwardly; cost \$6,768.98; Pemiscot County, State Aid Project 20.101; bids opened Nov. 1; M. S. Murray, Div. Engr., Sikeston, Mo. (Lately noted.)

Mo., Chillicothe—State Highway Dept., Jefferson City, Mo., will construct 1.804 mi. state road from Chillicothe southward. Livingston County, State Aid Project 20.34; cost \$50,052.64; A. C. Singley, Div. Engr., St. Joseph, Mo.

Mo., Chillicothe—Livingston County will grade airline road across Grand river bottoms; cost about \$50,000. Address County Commrs.

Mo., Fredericktown—Madison County will improve 5 mi. hard road from point south of Edwardsville to Troy and connecting with improved highway from East St. Louis to Highland. Address County Commrs.

Mo., Kansas City—Board Public Works let contract to E. D. Tyner Construction Co.,

at \$17,767.35 to pave Bluff St.; 8-in. concrete pavement.

Mo., Kansas City—Board of Public Works will let contract for plain concrete pavement on Southwest boulevard; rock asphalt on Bellaire Ave.; reconstructing rock asphalt on West Prospect place; bituminous macadam pavement on S. Benton St.; etc.

Mo., Kansas City—City Board Public Works let paving contracts as follows. Mense & Glennon Construction Co., at \$54,988.55 to repave Southwest boulevard between 25th and 29th Sts.; 15,761 sq. yds. concrete pavement; Parker-Washington Co., \$4,521.84 to construct rock asphalt pavement on alley between Walnut St. and Grand Ave. and between 16th and 17th Sts.; Halpin-Boyle Construction Co. at \$3,288.32 to construct bituminous macadam pavement on Michigan Ave.; Frank Flynn Construction Co., low bidder for 1,742 sq. yds. pavement on S. Benton Boulevard.

Mo., Lamar—State Highway Dept., Jefferson City, Mo., will construct 17.00 mi. State road from Lamar eastward and westward; Barton County, State Aid Project 20.104; cost \$42,566.96; bids until Nov. 3; H. P. Moberly, Div. Engr., 505 Woodruff Bldg., Springfield, Mo. Lately noted. (See Machinery Wanted—Road Construction.)

Mo., Macon—Cox Bros., Dyke, Iowa, have contract for improvement work on cross-state highway at \$16,080.72.

Mo., Maysville—State Highway Dept., Jefferson City, Mo., will construct 3.185 mi. State road from Clarksdale southwestward; DeKalb County, State Aid Project 20.32; A. C. Singley, Div. Engr., St. Joseph, Mo.

Mo., New London—State Highway Dept., Jefferson City, Mo., will construct 2.33 mi. State road from Perry westward; Ralls County, State Aid Project 20.102; cost \$9,424.81; M. J. Hamick, Div. Engr., Macon, Mo.

Mo., Perryville—State Highway Dept., Jefferson City, Mo., will construct 1.403 mi. State road from Perryville to Clarryville; Perry County, State Aid Project 20.114; M. S. Murray, Div. Engr., Sikeston, Mo.

Mo., Poplar Bluff—City will pave 5 mi. streets; concrete; invites bids; P. T. Sigler, Mayor.

Mo., St. Genevieve—State Highway Dept., Jefferson City, Mo., will construct 1.461 mi. State road from Weingarten southwestwardly; St. Genevieve County, State Aid Project 20.100; cost \$18,335.82; bids until Nov. 4; M. S. Murray, Div. Engr., Sikeston, Mo. Lately noted. (See Machinery Wanted—Road Construction.)

Mo., Steelville—State Highway Dept., Jefferson City, Mo., will construct 7.210 mi. State road from Cuba westward; cost \$20,930.77; Crawford County, State Aid Project 20.105; bids opened Nov. 2; H. D. Griffith, Div. Engr., DeSoto, Mo. Lately noted. (See Machinery Wanted—Road Construction.)

Mo., Waynesville—State Highway Dept., Jefferson City, Mo., will construct 1.371 mi. State road from Waynesville eastward; Pulaski County, State Aid Project 20.107; cost \$16,760.74; bids until Nov. 4; H. D. Griffith, Div. Engr., DeSoto, Mo. Lately noted. (See Machinery Wanted—Road Construction.)

N. C., Asheville—City will let contract to E. T. Belote to pave Carter and Crescent Sts. Address City Commrs. (Lately noted.)

N. C., Asheville—State Highway Comsn., Raleigh, N. C., will let contract for 18 mi. Allman to Topton Road; Project 538; cost \$215,000.

N. C., Columbia—North Carolina State Highway Comsn., Raleigh, N. C., let contract to C. W. Lacy, Wilmington, N. C., at \$43,682 to construct 6.91 mi. top-soil road in Tyrell County between Washington county

line and Columbia. (Lately noted inviting bids.)

N. C., Durham—North Carolina State Highway Comsn., Raleigh, N. C., will construct 2.30 mi. State highway in Durham and Orange Counties; 24,350 sq. yds. plain or reinforced concrete pavement or 24,350 sq. yds. combination base and header course with 23,000 sq. yds. Topeka, sheet or rock asphalt or warrenite surfacing; bids until Nov. 8. Lately noted. (See Machinery Wanted—Road Construction.)

N. C., Halifax—North Carolina State Highway Comsn., Raleigh, N. C., will construct 5.67 mi. bituminous macadam on clay gravel base between Weldon and Roanoke Rapids, Project 601, Halifax County; low bidder O. F. Leighton, Inc., Richmond, Va., at \$113,230. (Lately noted inviting bids.)

N. C., Louisburg—North Carolina State Highway Comsn., Raleigh, N. C., let contract to Chandler & Ragland, Virginia, Va., at \$25,726.75 to construct 9.83 mi. road in Franklin and Nash counties between Webb's Mill and Wake county line on road from Raleigh to Rocky Mount; structures to Southern Dray Co., Asheville, at \$20,811.

N. C., Nashville—North Carolina State Highway Comsn., Raleigh, N. C., let contract to J. A. Kreiss, Knoxville, Tenn., at \$32,28.25 to construct 11.22 mi. top-soil road in Nash County between Webb's Mill and Nashville; structures at \$40,805.30; Project 613. (Lately noted inviting bids.)

N. C., Oxford—North Carolina State Highway Comsn., Raleigh, N. C., will construct 5.12 mi. State highway in Granville County between Oxford and Bullock on Route No. 75; State Project 427; bids until Nov. 8. (See Machinery Wanted—Road Construction.)

N. C., Raleigh—North Carolina State Highway Comsn., Raleigh, N. C., will construct 6.64 mi. State Highway in Wake county between end of Federal Aid Project No. 24 at Garner and Johnston county line on Route No. 10; State Project 482; 62,400 sq. yds. plain or reinforced concrete pavement or 62,400 sq. yds. combination concrete base and header course with 58,500 sq. yds. Topeka, sheet or rock asphalt or warrenite surfacing; bids until Nov. 8. Lately noted. (See Machinery Wanted—Road Construction.)

N. C., Swanquarter—North Carolina State Highway Comsn., Raleigh, N. C., let contract to C. W. Lacy, Wilmington, N. C., at \$50,255 to construct 4.30 mi. top-soil road in Hyde County; Project 564; low bidder on structures M. W. Cooper, Kinston, N. C. (Lately noted inviting bids.)

Okla., Muskogee—State Highway Dept., Oklahoma City, Okla. let contract to Allen & Harrison, Oklahoma City, at \$372,225 for 11 mi. road between Okmulgee and Beggs.

Okla., Muskogee—Muskogee County let contract to Stebbins-Werhan Contracting Co., at \$8,645 to improve and grade 4 mi. road between Fort Gibson and Braggs.

Okla., Wagoner—Wagoner County will construct roads in Bluemound township; vote Nov. 17 on \$75,000 bonds. Address County Commrs.

S. C., Abbeville—Abbeville County Highway Comsn., let contract to W. C. Hill, Newberry, S. C., at \$15,489.88 to construct 7.36 mi. Donalds-Greenwood road.

S. C., Anderson—Anderson County let contract to Newell Contracting Co. to top-soil 12 mi. road; cost \$36,000; W. A. Sanders, County Engr. (Lately noted inviting bids.)

S. C., Charleston—City will vote Nov. 8

on bonds for street improvements. Address The Mayor.

S. C., Columbia—Richland County Permanent Roads Comsn. let contract to Caughman Contracting Co., to pave Koon road to Fairfield county line. (Lately noted inviting bids.)

S. C., McCormick—McCormick County sold \$30,000 road construction bonds. Address County Commrs.

S. C., Orangeburg—Orangeburg County will construct 7.731 mi. Columbia-Savannah highway between Calhoun County line and city limits of Orangeburg; 10,032 cu. yds. sand-clay surfacing; etc.; bids until Nov. 8; L. K. Sturkie, Clk. Highway Comsn. (See Machinery Wanted—Road Construction.)

S. C., Ridgeland—Jasper County Highway Comsn. sold \$100,000 bonds for road construction; will invite bids on road from Ridgeland to Hampton county line.

S. C., Walhalla—Oconee County will construct 12.8 mi. top-soil road between Westminster and Cross Roads and from Oakway to South Union; also surface with top-sail railroad bed between Madison and Westminster and Seneca and Clemson College; 14 mi.; bids opened Oct. 28; M. R. McDonald, Secy. Highway Comsn.; J. N. Stribling, Engr.

Tenn., Dyersburg—Dyer County will grade and construct bridges and culverts on following roads: Section B from Obion river to Heloise 6.5; Section C from Newbern to Lane's Ferry 10 mi.; Section D from Richmond to Bradley's Ferry 8 mi.; bids opened Oct. 25; L. O. Brayton, Engr. (Supersedes recent item.)

Tenn., Jamestown—Fentress County sold \$150,000 road construction bonds. Address County Commrs.

Tenn., Johnson City—City Comsn. let contract to Municipal Paving Co., to lay asphalt-concrete wearing surface on E. Maple St.; also plans paving other streets.

Tenn., Lenoir—City will pave, grade, curb and gutter Improvement Dists. No. 7 and 8; 24,461.83 sq. yds. paving; 14,334 lin. ft. curbing; etc.; bids until Nov. 10; S. P. Witt, Mayor. (See Machinery Wanted—Paving.)

Tenn., Lenoir City—City will sell \$82,500 street improvement bonds; S. H. Monger, City Recorder.

Tenn., Memphis—City Comsn. plans extending North Parkway from Manassas St. to Jackson Ave.; 100-ft. wide; cost \$76,000; South Third St. from Beale to Calhoun Ave., widen from 45 to 66 ft. cost \$234,737.00; South Second St., widen from 40 to 66 ft. between Beale and Calhoun Aves., cost \$376,776.54.

Tenn., Sevierville—City will build macadam streets; cost about \$400,000; vote on bonds. Address The Mayor.

Tex., Abilene—City let contract to Scott & Mallett, at \$18,000 to construct 4 blocks concrete paving on N. First St.

Tex., Athens—City let contract to Smith Bros. Crockett, Tex., to construct 29,000 sq. yds. pavement; brick surface with 6-in. rolled gravel base; \$100,000 available; G. W. Courter, Engr., Marlin, Tex. (Lately noted.)

Tex., Bay City—Matagorda County will construct 7.23 mi. Highway No. 12-A; F. A. Project 175; bids until Nov. 8; Amos Lee, County Auditor. (See Machinery Wanted—Road Construction.)

Tex., Bay City—Matagorda County will receive bids on construction of 7.23 mi. 12-ft. shell surfaced road on Highway 12-A; J. C. Carrington, County Engr.; J. F. Perry, County Judge.

Tex., Beeville—City Comsn. will pave Hef-

erman and Bowle Sts. from Washington St. west to San Antonio and Aransas Pass tracks. Address The Mayor.

Tex., Brownsville—City will pave streets; voted \$100,000 bonds; A. B. Cole, Mayor; J. C. Spencer, City Engr. (Previously noted to vote.)

Tex., Denison—City will pave Houston Ave., 12,628 sq. yds. reinforced concrete or 11,518 sq. yds. asphaltic concrete, bitulithic or Uvalde rock asphalt; 3,670 ft. plain gutter, 2,800 ft. combination curb and gutter; also Morton St., 15,300 sq. yds. reinforced concrete, 14,070 sq. yds. asphaltic concrete, bitulithic or Uvalde rock asphalt, 3,780 ft. plain gutter, 3,600 ft. combination curb and gutter; bids opened Oct. 27; J. L. Short, Secy.

Tex., Denton—Ch. Engr. U. S. Bureau Public Roads, Washington, D. C., approved plans for constructing of 8 mi. 16-ft. gravel road on Highway No. 41, Denton County; cost \$139,347.77; T. E. Huffman, County Engr.; Ed. I. Key, County Judge.

Tex., Denton—Denton County will surface 10.03 mi. Dallas-Denton road; bituminous treatment; 94,190 sq. yds.; also construct 8.54 mi. Dallas-Sherman road; bids until Nov. 3; T. E. Huffman, County Engr. (See Machinery Wanted—Road Construction.)

Tex., Elgin—City is improving main streets and plans paving other streets. Address The Mayor.

Tex., Fort Davis—Jeff Davis County let contract to Lee-Moor Construction Co., Two Republics Bldg., El Paso, Tex., at \$15,516.40 to construct 7.22 mi. Highway No. 1; J. W. Merrill, County Judge. (Lately noted.)

Tex., Gainesville—Cooke County plans constructing 1.82 mi. Highway No. 40 on north end of Valley View road Dist.; H. S. Holman, County Judge; T. E. Huffman, County Engr., Denton, Tex.

Tex., Jefferson—City let contract to Panhandle Construction Co., Lubbock, Tex., at \$74,340 to construct 18,000 sq. yds. 2½ in. vertical fibre brick pavement with asphalt filler on 4 in. concrete base; H. E. Elrod Co., Consult. Engr., 3124 Elm St., Dallas, Tex.

Tex., Kaufman—Kaufman County let contract to Russel DeFord, Terrel, Tex. to grade Terrell-Poetry, Terrell-Chisholm and Terrell-Ables Springs road.

Tex., Laredo—City will pave streets in business district; voted \$150,000 bonds; Leopoldo Villegan, Mayor. (Supersedes recent item.)

Tex., Livingston—Polk County let contract to S. T. Stanford, Pickapoo, Tex., to grade, clear and grub 9.7 mi. Highway No. 35; W. C. Youngs, County Engr. (Lately noted inviting bids.)

Tex., Mission—City sold \$25,000 bonds for street improvements. Address The Mayor.

Tex., Mt. Vernon—Ch. Engr. U. S. Bureau Public Roads, Washington, D. C., approved plans for 12.3 mi. Highway No. 1; W. R. Irby, County Judge.

Tex., Montague—Montague County will construct roads to and through Nocona; voted on \$260,000 bonds. Address County Commrs.

Tex., Pecos—Reeves County plans to construct 5.68 mi. gravel surfaced road on Old Saragosa-Pecos City road; cost 727,900; J.

T. Ross, County Judge; A. F. Mitchell, County Engr., Cameron, Tex.

Tex., Pecos—Reeves County let contract to W. E. Hamilton, Van Horn, Tex. at \$107,000 to construct 31 mi. gravel road on Bankhead highway; A. L. White, Engr., Toyah, Tex. (Supersedes recent item.)

Tex., Port Lavaca—Calhoun County let contract to Miller Construction Co., at \$93,653.87 to surface, grade and drain 11.37 mi. 12-ft. shell road on Highway No. 7. (Lately noted inviting bids.)

Tex., San Antonio—McKenzie Construction Co. has contract for paving in Monta Vista addition; cost \$23,000.

Tex., Sherman—Grayson County plan selling \$190,000 bonds for road construction. Address County Commrs.

Tex., Uvalde—Uvalde County sold \$180,000 bonds for road construction; D. H. Jones, County Judge. (Lately noted.)

Va., Amherst—Dist. Engr., Bureau Public Roads, U. S. Dept. Agriculture, Washington, D. C., will construct 6.7 mi. James river National Forest road Project in Amherst and Rockbridge counties; bids until Nov. 7; Vernon M. Pierce, Dist. Engr., 506 Willard Bldg., Washington, D. C. (See Machinery Wanted—Road Construction.)

Va., South Norfolk (P. O. Norfolk)—City will vote Nov. 8 on \$300,000 bonds for street improvements and improvement of sewer system; F. L. Rowland, Mayor.

W. Va., Elkins—City let contract to Ferguson & Holbert Co., Shinnston, W. Va., to pave around Western Maryland freight depot; cost \$15,000; also let contract to Shaid Contracting Co., Elkins to pave Livingstone Ave.; cost \$20,000.

Sewer Construction.

Ala., Bessemer—City will construct sanitary sewer in 5th ward, including Jonesboro; contemplates voting on \$40,000 bonds; B. C. Jones, Mayor.

Ala., Birmingham—City will construct sanitary sewers; Ordinances No. 147-D, 152-D and 157-D; bids opened; Julian Kendrick, City Engr.

Ala., Tuscaloosa—City, Board of Commrs., D. B. Robertson, Prest., let contract to Hodgeson & Jones, Montgomery, Ala., at \$17,390.76, to construct storm sewer system in eastern part of city; W. H. Nicol, City Engr. (Lately noted inviting bids.)

Ark., Pine Bluff—City let contract to Kellher Construction Co., Little Rock, Ark., at \$6,457.95, to improve sewers in Dist. No. 19; J. H. Guest, City Engr.

Fla., Green Cove Springs—City will construct sewers; extend electric light and water plants; pave streets; voted \$150,000 bonds. Address The Mayor. (Previously noted may vote.)

Fla., Manatee—City will extend sewer system; voted \$2,000 bonds; McElroy Engineering Co., Engr., Tampa, Fla.; T. M. Duffee, Mayor; Chas. J. Majory, Clk. (Lately noted to vote.)

Fla., West Palm Beach—City, A. M. Lopez, Clk., will install sewer system; vitrified clay sewer pipe; bids until Nov. 22; Carr & McFadden, Engrs. Lately noted. (See Machinery Wanted—Sewers.)

Fla., West Palm Beach—City will improve sewers, parks, streets and sidewalks; plans issuing bonds. Address The Mayor.

Fla., St. Augustine—City, Eugene Masters, City Mgr., will install sewerage system in Dist. No. 9; construct septic tank; lay pipe to connect with tank; later will install sewerage system in Dist. No. 1. (Lately noted.)

La., Alexandria—City, John Polsy, Mayor,

will install sewers in Casson and 5th Sts.; W. H. Sylvester, City Engr.

Mo., Columbia—City will construct sewer system; E. J. McCaustland, Engr., School of Engineering, University of Missouri.

Mo., Gallatin—City plans installing sewer system; C. E. Jacoby, Engr., Shukert Bldg., Kansas City, Mo.

Mo., Independence—City issued \$150,000 sewer bonds. Address The Mayor.

Mo., Sedalia—City let contract to B. Bertman to construct sewers in Dist. No. 11; lay 8-in. laterals to connect with main sewer; F. T. Leaming, City Engr. (Lately noted inviting bids.)

N. C., Asheville—City, P. H. Schoepf, Pur. Agt., will construct sewers in Deaver st.; bids opened Oct. 31; B. M. Lee, City Engr. (See Machinery Wanted—Sewers.)

N. C., Asheville—City, P. H. Schoepf, City Pur. Agt., plans constructing 6-in. sanitary sewer on Louisiana St.; City Engr. Lee.

N. C., Charlotte—Graham Heights Land Co., McCoy Moretz, Prest., 10 E. 4th St., will lay sewer lines in 300-acre site to be developed; C. G. Hubble, Engr. (See Land Development.)

N. C., Lenoir—City will improve sewer system; vote Nov. 1 on \$150,000 bonds. Address The Mayor. (Supersedes previous item.)

Tex., Mission—City will improve sewer system; sold \$15,000 bonds. Address The Mayor.

Tenn., Nashville—City, Board of Public Works will construct sewers in Alley 718, 8th St., Nelson and Sigler Sts., etc.; bids opened; S. H. McKay, City Clk. (See Machinery Wanted—Sewers.)

Tenn., Nashville—City, Board of Public Works, will construct sewer in Alley 280, between Smillet and Bienville Sts.; bids opened Oct. 28; Felix Z. Wilson, Mayor; S. H. McKay, City Clk. (See Machinery Wanted—Sewers.)

Tex., Van Alstyne—City will extend sewer system; voted \$30,000 bonds. Address The Mayor.

Tex., Wortham—City will install sewer system; vote Nov. 7 on bonds; Engineering Service Co., Consit. Engrs., Dallas, Tex.

Va., South Norfolk, P. O. Norfolk—City, F. L. Rowland, Mayor, will improve sewer system and streets; vote Nov. 8 on \$300,000 bonds.

Shipbuilding Plants.

Md., Baltimore—Speed Boats, etc.—Aeronautical Supply Export Corp., 415 E. 25th St., capital \$24,000, inceptd. by Temple N. Joyce, Mary M. Jackins and Paul G. Ballard; mfr. air crafts, speed boats, hydroplanes, etc.

Street Railways.

Okla., Oklahoma City—Oklahoma Railway Co. is building an extension to Lincoln Park 3 mi. from city limits; also extension on Linwood Boulevard 1½ mi. Construction of Blackwelder Ave. line soon to begin.

Telephone Systems.

Ala., Huntsville—Junior Chamber of Commerce interested in establishing telephone line connecting Huntsville and Lacey Springs.

Tex., Port Arthur—Navy Dept., Bureau of Yards and Docks, Washington, D. C., let contract to erect quarters for wireless station. (Previously noted.)

Tenn., Morristown—Stuart-Burke Garage Co. will install radio telephone system.

Textile Mills.

Ala., Opelika—Hosiery—Farley's Hosiery Mill, Jno. C. Farley, Jr., Propr., will install 260-needle, 3½-in. cylinder knitting machines to mfr. women's silk hosiery.

Fla., Ocala—Underwear—Florida Knitting Mills, organized with J. M. Jackson, Mgr.; formerly Ocala Knitting & Mfg. Co.; has established plant.

Fla., Tampa—Tampa Textile Co., capital \$50,000, inceptd. with R. T. Merck, Prest.; W. O. Dunlock, V-P.; T. G. Brown, Secy.-Treas.

Ga., Rome—Cotton Goods—Charles E. Mc. Lin, Isaac May and C. B. Brown, interested in establishing \$200,000 cotton mill.

La., New Orleans—Bags—Fulton Bag & Cotton Mills, Louis J. Elsas, Secy., Atlanta, Ga., let contract to O. M. Gwin Construction Co., New Orleans, at \$63,060, to 102x60 ft. mill construction building; composition roofing; Sam Stone, Jr., Archt., New Orleans.

N. C., Pittsboro—Chamber of Commerce, Colin G. Shaw, Secy., interested in establishing textile mill.

N. C., Spindale—Ginghams—Stonecutter Mills are installing finishing machinery; will mfr. fancy dress ginghams.

S. C., Charleston—Cotton Batting—Southern Cotton Batting Co., organized with A. A. Hirsch, Prest., is erecting plant and installing machinery to mfr. cotton batting from 3-in. automobile to 90-in. comfort batt.

S. C., Fort Hill—Ginghams—Fort Mfg. Co., Waddy C. Thompson, Secy.-Treas., contemplate erecting new cotton waste house.

Tenn., Philadelphia—Knitting Goods—Philadelphia Knitting Mill, capital \$25,000, organized with J. H. Thompson, Prest.; is erecting mill building.

Water Works.

Fla., Green Cove Springs—City will extend water and electric light plants; construct sewers; pave streets; voted \$150,000 bonds. Address The Mayor.

Fla., Manatee—City will extend waterworks; voted \$4,000 bonds; McElroy Engineering Co., Engr., Tampa, Fla.; T. M. McDuffee, Mayor; Chas. J. Majory, Clk. (Lately noted to vote.)

Fla., Plant City—City, Mayor Lee, plans installing additional pumping unit at waterworks.

Ga., Helena—City, D. L. McLaughlin, Mayor, let contract to J. B. McCrary Co., Atlanta, Ga., to install water-works; Jno. H. Lowe, Consit. Engr., 313 Davis-Exchange Bank Bldg., Albany, Ga. (Previously noted inviting bids.)

Ky., Carrollton—City, J. E. Gullion, Mayor, plans operating and maintaining water and light plant; vote Nov. 8 on \$22,000 bonds.

Ky., Falmouth—City will improve waterworks and electric light plant; vote Nov. 8 on \$15,000 bonds. Address The Mayor.

La., Columbia—City sold \$30,000 waterworks and electric light bonds. Address The Mayor.

Mo., Poplar Bluff—City, P. T. Sigler, Mayor, will expend \$20,000 to extend waterworks; bids opened; E. C. Nicky, Engr. (Lately noted.)

N. C., Charlotte—Graham Heights Land Co., McCoy Moretz, Prest., 10 E. 4th St., will lay 10,000 ft. 4 and 6-in. water main on 300-acre site to be developed; C. G. Hubble, Engr. (See Land Development.)

Okla., Braggs—City will extend and improve water-works; voted \$10,000 bonds; Green Engineering Co., Engr., Oklahoma City.

Okla., Marlow—City plans constructing 4 mi. mains; 250,000-gal. reservoir, pumps and wells; V. V. Long & Co. Engrs., 1300 Colcord Bldg., Oklahoma City.

Okla., Pawhuska—City, W. I. Broadus, Clk., will improve water-works; install pumping station, reservoir and mains; bids opened Oct. 27; H. G. Olmstead & Co., Engrs., Tradesmans Bank Bldg., Oklahoma City. (Lately noted.)

S. C., McCormick—Town, W. M. Cheat-ham, Mayor, contemplates installing water-works.

Tex., Ferris—City will expend \$55,000 to improve water-works; E. L. Dalton, Supvg. Engr., Dallas, Tex.

Tex., Mission—City will improve water-works; sold \$10,000 bonds. Address The Mayor.

Tex., New Braunfels—City will install 1,000,000-gal. and 800,000-gal. or two 500,000-gal. twin standpipes, 108 ft. high; bids until Nov. 10; M. L. Diver, Engr., Bedel Bldg., San Antonio, Tex.

Tex., Van Alstyne—City will extend water-works; voted \$15,000 bonds. Address The Mayor.

Tex., Wortham—City will install water-works; vote Nov. 7 on bonds; Engineering Service Co., Consit. Engrs., Dallas, Tex. (Lately noted.)

W. Va., Huntington—Chesapeake & Ohio Ry. Co., C. W. Richmond, Ch. Engr., Richmond, Va., plans installing reservoir for shops on land adjacent to Rotary Park; contemplates utilizing surplus water for park lake.

W. Va., Padon City—City will issue \$27,500 water-works bonds; S. I. Furbie, Mayor.

Woodworking Plants.

Fla., Sanford—Crates—Universal Crate Co., capital \$25,000, inceptd. with Phillip Simmons, Prest.; John E. Wade, Secy.-Treas.; mfr. folding and collapsible crates.

Miss., Gulfport—Seats, etc.—Gulf Coast School Supply Co., capital \$20,000, inceptd. by Donald Rymel McMullity and J. D. Cowan; mfr. school supplies including seat, etc.

Tex., Lufkin—Chairs, etc.—Lufkin Chair & Handle Co. inceptd. by W. D. Newsome, E. E. and R. T. Gann.

Fire Damage.

Ala., Jasper—Nashville, Chattanooga and St. Louis Ry.'s depot; H. McDonald, Ch. Engr., Nashville, Tenn.

Ark., Damascus—Dr. W. J. Hutto's residence.

Ark., Fort Smith—Best-Clymer Mfg. Co.'s plant; loss \$35,000; Temtor Products Co., owners, St. Louis, Mo.

Ark., Paragould—Independent Gin Co.'s cotton house.

Fla., Pensacola—Chris Thiesen's building at 10th Ave. and E. Garden St.

Fla., Tallahassee—Mrs. Ola M. Richardson's apartment house on W. College Ave.; loss \$10,000.

Ga., Atlanta—Frank Burdett's cotton ginnery and planing mill on Dunwoody Road; loss \$5,000.

Ga., Blundale—Emanuel Farm Co.'s cotton warehouse.

Ga., Girard—Alex Tharp and Jno. Rogers' stores; 3 dwellings owned by Moses estate (L. I. Moses and others).

Ga., Milner—P. W. Ethridge's roller mill, 2 mi. west of Milner; loss \$10,000.

Ky., Barlow—Howard Yancey's flour mills; loss \$12,000; Barlow Christian Church. (Address The Pastor.)

Ky., Bedford—Terrell Bros.' garage, implement house and stable; loss \$20,000.

Ky., Bethel—James Ledford's residence; loss \$25,000.

Ky., Burkesville—Baker Hotel (address The Proprietor); Cumberland County Bank building; Simpson Store; loss \$35,000.

Ky., Shelbyville—Star Tobacco Warehouse Co.'s building; loss \$60,000; Burley Warehouse Co.'s building; loss \$15,000.

La., Alexandria—Belle Pre Glass Co.'s plant; loss \$50,000; Old Dominion Glass Co., owner.

La., Alexandria—A. N. Moore's residence on Country Club Dr.; loss \$10,000.

La., New Orleans — Forscher Wagon Works, Dixie Lumber & Cooperage Co. and Beck-Jones Cooperage Co.'s plants; W. D. Ward Lumber Co.'s yards.

Md., Easton—Chas. E. Humphreys' residence in Baileys Neck, Trips Creek; loss \$18,000.

Md., Elkridge—Fairy Knowe Hotel and auxiliary buildings on Lawyer's Hill owned by Thos. V. Boardman; loss \$75,000.

Miss., Lucedale—Lucedale High School. Address Board of Education.

Miss., Mt. Olive—Baptist Church. Address The Pastor.

Mo., Caruthersville—Union Gin Co.'s cotton house; Ward-Coppage Gin Co.'s cotton house.

Mo., Kansas City—W. J. Reintjes' residence at 120 E. Spring St.; loss \$25,000; H. T. Thorston's residence at 116 E. Spring St.; loss \$3500; other buildings damaged.

Mo., St. Louis—Missouri Pacific R. R.'s chemical storeroom at 3001 Chateau Ave.; E. A. Hadley, Ch. Engr., St. Louis.

Mo., St. Louis—J. S. Sanger Mfg. Co., loss \$3,000; National Skirt Co. and Central Garment Co., total loss \$16,000; Nelson Pollack Clothing Co., loss \$1,000; Hirschfeld Bros. Skirt Co.

Mo., St. Louis—B. Harris Wool Co.'s warehouse, 107-13 S. Main St.; Benjamin Harris, Prest.

Mo., St. Louis—Wiles-Chipman Lumber Co.'s yards loss \$100,000.

N. C., Beulaville—Washington Sandlin's cotton ginnery and saw mill; loss approximately several thousand dollars.

N. C., Fayetteville—Grand Hotel owned by Mrs. J. H. Marsh; Rosemont Hotel, owned by Smith & Sandrock; Royal Cafe owned by Chas. Kalevas.

N. C., Wadesboro — Ingram Apartment House. Address The Owner.

Okla., Ada—Pontotoc County Farmers' Union warehouse.

Okla., Lindsay—Chickasha Cotton Oil Co's ginnery, J. B. Boone, Mgr.; loss \$20,000.

Okla., Red Fork—Sunlight Carbon Co.'s plant.

Okla., Tulsa—Constantin Refining Co.'s plant; loss \$25,000.

S. C., Florence—Howard Cannon's tobacco warehouse; loss \$15,000.

S. C., Union—Hughes & Jenkins' garage; loss \$40,000.

S. C., Walhalla—Oconee Cotton & Fertilizer Co.'s ginnery; loss \$3,500.

Tenn., Bradford—Home Telephone Exchange; loss not estimated.

Tex., Austin—Tipps Foundry & Machine Shop Co.'s plant.

Tex., Gonzales—A. Newman's warehouse.

Tex., Houston — Usatex Mattress Co.'s plant 1809 Commerce Ave.; Mrs. J. D. Collins' rooming house; other buildings.

Tex., Lufkin—A. E. Hart's grist mill; loss \$8,000.

Tex., Mexia—Mrs. J. W. Kinchels' residence at Sherman and Palestine Sts.; loss \$10,000.

Tex., Mexia—Clopton Hotel owned by Mrs. R. E. Clopton; loss \$20,000; Bertholson Community House near Bertholson well; loss \$10,000.

Tex., Mexia—Carter Tire & Battery Co.'s filling station; loss several thousand dollars.

Tex., Mexia—Hughes Hotel; loss \$25,000. Address The Proprietor.

Tex., Orange—Humble Oil & Refining Co.'s fuel tank, pumping plant and derrick.

Tex., Paris—Will Wright's wagon yard.

Tex., Rockford; (P. O. Bairdstown)—Sam Parker's ginnery; loss \$10,000.

Tex., Rice—H. C. Noel's cotton ginnery; loss \$20,000.

Tex., San Antonio—Fred Small's stables on Dwyer Ave.

Fla., Tampa—Odd Fellows and Rebekah lodges, L. J. Lester, Chrmn. Bldg. Comm., 900 Florida Ave., will erect \$20,000 building.

Tenn., Nashville — Salvation Army, Mr. Sproule, Adjutant, will erect \$100,000 building; 57x86 ft.; brick and reinforced concrete; built-up asphalt roof; reinforced concrete floors; low pressure steam heat; bids received until Oct. 29 by C. K. Colley & Co., Archts., 310 Fourth and First Natl. Bank Bldg. (Lately noted.)

Bank and Office.

D. C., Washington—Dome Oil Co. will erect \$15,000 office and warehouse at 6925 Blair Rd.; 2 stories; brick.

Ga., Augusta—Marion Building Co., H. H. Saxon, Agent, will expend \$400,000 to reconstruct and equip building damaged by fire; 10 stories; 40x120 ft.; steel, stone, brick and terra cotta; slag roof; terrazzo, tile, marble and concrete floors; steam heat; electric lights; hollow fireproof tile; ornamental terra cotta; interior tile; metal doors; vaults; wire glass; mail chutes; vault lights; ventilators; steel sash and trim; electric passenger and freight elevator; G. Lloyd Preacher & Co., Archts., Atlanta and Augusta, will open bids at Augusta office about Dec. 15. (Lately noted.)

Ga., Savannah—Mechanics Saving & Investment Co., P. Edw. Perry, Prest., will erect \$100,000 building at Maple and W. Broad Sts.

Ga., Waycross—Laborers' Penny Savings & Loan Co., Carlton W. Gaines, Prest., will receive bids until Nov. 15 to erect 3-story bank and office building; drawings and specifications at Wage Earners Savings Bank, Savannah, L. E. Williams, Prest., and at Laborers' Penny Savings & Loan Co.

Md., Baltimore—Fisher & Carozza Bros. Co., A. T. Carozza, Prest., Calvert Bldg., is negotiating for finances to erect office building; site, 148 ft. on Water St., 65 ft. on Commerce St. and 35 ft. on South St., embracing structure at Commerce and Water Sts., owned by Wm. J. Donnelly, of Maury & Donnelly-Williams Co.; tentative plans provide structure 24 to 26 stories; details not determined; Frederic A. Fletcher, Archt., 407 N. Charles St.

N. C., Fayetteville—Huske Building Corp. will erect 5-story building on Hay St.; brick; cost \$100,000; 4 stores on first floor; offices, above.

Okla., Oklahoma City—Oklahoma Branch of Federal Reserve Bank of Kansas City will erect \$500,000 building at 3rd St. and Harvey Ave.; 4 stories; steam heat; Graham, Anderson, Probst & White, Archts., 80 E. Jackson Blvd., Chicago. (Lately noted.)

Tenn., Knoxville—Ryno & Brackney prepared plans to remodel Henson Bldg.; cost \$15,000; new entrance of Tennessee marble; remodel lighting fixtures and plumbing.

Tenn., Knoxville — Price-Baumann Tire Co. will erect 2nd story addition for offices to building on Market St., between Main and Cumberland Aves.; A. B. Baumann, Archt.

W. Va., Martinsburg—Dr. G. P. Morison will expend \$20,000 to alter and erect additions to building at Maple Ave. and King St. for offices and apartments; address J. F. Roystone, Archt.

Churches.

Ark., Wynne—First Methodist Church, Dr. J. L. Hare, Chrmn. Bldg. Comm., will erect \$25,000 Sunday school addition; 3 stories and basement.

Fla., Lakeland—T. E. Robertson, W. E. Boger, G. H. Dickerson and others, committee to erect church; cost \$20,000; brick.

BUILDING NEWS

BUILDINGS PROPOSED

Apartment Houses.

D. C., Washington—Allan E. Walker Investment Co. will erect 2 apartment houses at 128-30 Webster St.; 2 stories; brick; cost \$80,000.

Fla., Bradentown—Geo. Wallace will erect \$80,000 building; 2 stories; 128x100 ft.; 6 stores on first floor; 18 apartments above; tile flooring on first floor.

Tex., Dallas—Paul S. Erle will erect \$14,000 apartment house at 4719-21 Live Oak St.; 12 rooms; brick veneer.

Tex., Dallas—Finnegan & Cammack will erect \$20,000 apartment house at 4235-37 Lemmon St.; brick; 32 rooms.

Tex., Dallas—Mrs. Margaret Iridel will erect \$10,000 apartment house at 2719 Shelby St.; frame; 20 rooms.

Tex., Fort Worth—John H. Rogers will erect \$16,000 apartment house at 2019 Hemp Hill St.

Tex., Houston—Dr. and Mrs. Margaret Cox will erect \$25,000 apartment house at Brand and Day Sts.; 2 stories; brick.

Tex., San Antonio—Sam W. Stroud will erect \$10,000 apartment house on E. Courtland Pl., between Main Ave. and Ogden St.; 10 rooms; frame.

Va., Richmond—P. S. Lubienski will erect \$16,000 apartment house at 2311-13 Taylor St.; 3 stories; brick; 30x90 ft.

W. Va., Charleston—Mrs. Ida Alexander will erect \$10,000 apartment house on Lee St., between Morris and Bradford Sts.; 30x36 ft.; 2 stories; 12 rooms; brick and stucco.

Association and Fraternal.

Fla., Dade City—American Legion, Guy Fountain, Commander, will erect club house.

Fla., Sarasota—American Legion, A. L. Joiner, Post Commander, Homer Webb, Adjutant, will erect \$32,000 home.

Ga., Atlanta — St. Anthony's Catholic Church, Rev. N. O. Jackson, Pastor, plans to complete building at Gordon and Ashby Sts.

Ga., Statesboro—Primitive Baptist Church plans to erect brick building at E. Main and Zetterower Aves. Address The Pastor.

Mo., Kansas City—Maywood Methodist Church is erecting \$100,000 building at Washington and Northern Blvds.; auditorium to seat 550, Sunday school rooms, gymnasium, etc.; variegated slate roof; construction begun; Brostrom & Drotts, Archts. (Previously noted.)

N. C., Charlotte—First Baptist Church, Rev. Luther Little, Pastor, will erect \$60,000 Sunday school building; 80x70 ft.; brick; wood and concrete floors; steam heat; city lights. Address T. S. Franklin, Realty Bldg. (Lately noted.)

N. C., Winston-Salem—Peoples Institutional Church plans to erect building; Rev. G. J. Thomas, Raleigh, and H. R. Walden, Charlotte, interested.

S. C., Chester—Bethel M. E. Church plans to erect Sunday school building. Address The Pastor.

S. C., Columbia—Lutheran Church of the Ascension, Hyatt Park will erect Sunday school building. Address The Pastor.

S. C., McBee—Methodist Church will erect \$12,000 brick building. Address The Pastor.

S. C., Spartanburg — Bethel Methodist Church, C. P. Hammond, Capt. W. G. Willard and Dr. C. B. Walker, Bldg. Comm., will erect Sunday School building.

Tenn., Chapel Hill—Methodist Church, Rev. Mr. Simpson, Pastor, will erect \$15,000 building; 1 story and basement; concrete blocks and brick.

Tenn., Greeneville—Christian Church will erect \$25,000 building on Summer St. Address The Pastor.

Tex., Galveston—Trinity Church will erect addition to Eton Memorial Parish House; 2 wings, 15x60 ft.; 2 stories; brick, covered with cement; metal roof; pine floors; electric lights; architect not selected. Address Raimundo de Ovies, 2216 Ave. H. (Lately noted.)

Tex., San Antonio — Hillcrest Baptist Church, S. Flores St., Rev. Geo. E. Stewart, Pastor, will erect Sunday school addition and 6-room parsonage.

City and County.

Ala., Birmingham—Market House—Jefferson County voted \$300,000 bonds for market house. Address County Commrs. (Previously noted.)

La., Hammond — City Hall — City voted bonds including \$40,000 for city hall. Address The Mayor.

Miss., Hattiesburg—City Hall—City, W. E. Estes, Mayor Pro Tem, rejected bids to erect city hall; will call for new bids; Robt. E. Lee, Archt. (Lately noted.)

Tex., Amarillo—Library—City will erect \$20,000 library. Address The Mayor.

Tex., Mission—City Hall—City sold \$100,000 bonds voted in January, including \$20,000 for city hall.

Tex., San Antonio—Fire Station—City will erect \$50,000 fire station at Crockett and Nacogdoches Sts.; brick and stone; tile roof; plans by Dan Murphy, Bldg. Inspector. (Lately noted.)

W. Va., Charleston—Jail—Kanawha County Court will erect \$300,000 addition to courthouse for jail; 2 and 3 stories; H. Russ Warne, Archt. (Previously noted.)

Courthouses.

Mo., Sedalia—Pettis County will vote Nov. 15 on \$400,000 bonds to erect courthouse. Address County Commrs. (Previously noted.)

La., Iberia—Police Jury plans to expend \$35,000 to remodel and improve courthouse; install elevator; Paul Bassin, member of Comm.

Dwellings.

D. C., Washington—Sacred Heart Church, Rev. P. C. Gavan, Pastor, will erect \$90,000 rectory at 3211 Pine St., N. W.; 3 stories.

Fla., Fort Myers—A. L. Whitney will erect 5 dwellings.

Fla., Live Oak—T. T. Scott, Prop. of Scott Mfg. Co., will erect residence on W. Duval St.

Fla., Miami—Mayor Thos. E. James will erect 2-story residence at 11th St. and Lenox Ave.; concrete block and stucco.

Fla., Pinellas Park—J. W. Slicker is erecting 2 dwellings; ultimate plans provide for 12 or more cottages; 4 and 5 rooms.

Fla., Stuart—Mrs. H. W. Bessey will erect residence.

Fla., West Palm Beach—C. C. Lightbown will erect \$10,000 residence on Australian Ave.; 2 stories; stucco.

Fla., West Palm Beach—Jack Willson will erect number of 7 and 8-room dwellings.

Ky., Louisville—Iris J. Criten will erect \$10,000 residence at 1536 Cherokee Rd.

La., Baton Rouge—Chas. Maas will erect \$10,000 residence at Boyd and St. Mary Sts.

Md., Baltimore—Calvert Development Co. will erect 7 two-story brick dwellings at 3403-15 Forest Park Ave.; cost \$14,000.

Md., Baltimore—Geo. J. Jolliffe, 3002 N. Calvert St., will erect 5 two-story frame bungalows on Woodbourne Ave. nr. Cleveland Ave.; cost \$12,500.

Md., Baltimore—Martin J. Heller, 2801 W. Lafayette Ave., will erect 3 dwellings at Ashburton Ave. and Prospect St. and 3 at Dukeland Ave. and Prospect St.; 2 stories; brick; cost \$18,000; 14x40 ft.; hardwood floors; pipeless furnaces, \$100 each; plans and construction by owner.

Md., Baltimore—Geo. W. H. Pierson, 1000 Olive St., will erect \$10,000 residence at Charles and Highfield Sts.; 2½ stories; brick; 34x44.8 ft.; Howard Sill, Archt., 11 E. Pleasant St.

Md., Baltimore—Frank Novak Realty Co., E. 33rd St., nr. Tiffany Ave., purchased 56-acre tract on 33rd St., between Hillen Rd. and Venable Park and will erect three 2½-story dwellings in connection with development; ultimate plans provide for large number of cottages.

Mo., Kansas City — S. H. Kinney, 604 Houston St., will erect 2 dwellings; cost \$10,000 each; 24x44 ft.; frame; shingle roof; oak floors. (Lately noted.)

N. C., Charlotte—W. E. Holt, Lexington, will erect residence in Myers Park.

N. C., Charlotte—Graham Heights Land Co., McCoy Moretz, Pres., plans to erect number of dwellings in connection with development.

N. C., Greensboro—Mrs. Blanch W. Spencer, Martinsburg, Va., purchased property in Irving Park and will erect brick residence.

Okla., Tulsa—Ray S. Fellows will erect \$12,500 residence at 2150 S. Cincinnati St., Sunset Park.

S. C., Chester—Purity Presbyterian Church plans to erect manse on York St.; cost with site, \$16,000. Address The Pastor.

S. C., Chester—E. L. Guy purchased property on Foote St. and plans to erect residence.

S. C., Great Falls—Republic Cotton Mills will erect 25 bungalows. (See Contracts Awarded—Stores.)

S. C., Sumpter — S. A. Obenshain, State Highway Dept., will receive bids on Nov. 12 at Claremont Hotel to erect residence; plans may be seen at Mr. Obenshain's office, 12 Baker St., Sumpter, or may be obtained from C. C. Wilson, Archt., Columbia.

Tenn., Jellico — J. H. Barker will erect \$12,000 residence; brick veneer; metal tile roof; steam heat; Ryno & Brackney, Archts., Knoxville.

Tenn., Memphis—H. H. Higbee, 47 Porter Bldg., will erect residence; cost about \$10,000; 44x61 ft.; brick veneer; asphalt roof; oak, pine and concrete floors; hot water heat, \$1200; city electric lights; interior tile; construction by owner; all material contracted for. (Lately noted.)

Tenn., Memphis—Hugh Heiskell will erect number of dwellings on Tanglewood Ave.; colonial type; Raymond B. Spencer, Archt.

Tenn., Memphis—L. B. Rosebrough will erect colonial residence in Glenview Park; Raymond B. Spencer, Archt.

Tex., Dallas—J. W. Bailey will erect 3 four-room and 2 five-room dwellings; frame; cost \$11,000.

Va., Richmond—M. W. Strother will erect \$12,000 residence at 3708 Chamberlayne Ave.; brick.

Va., Richmond—R. D. Watkins will erect \$40,000 residence at 704 Westover Ave.; brick.

W. Va., Charleston—H. D. Goshorn will erect \$12,000 residence on Quarrier St., between Ruffner Ave. and Elizabeth St.; 36x33 ft.; 2 stories, basement and attic; 10 rooms; brick and tile.

W. Va., Shinnston—C. A. Short will erect number of bungalows, lately noted; cost \$3000 each; 27.6x44 ft.; frame; slate surface shingle roofs; oak and concrete floors; electric lights; hollow fireproof tile; plans and construction by owner. (See Machinery Wanted—Heating Plant.)

Government and State.

Okla., Tulsa—Armory—Battery C., second field artillery, Oklahoma Natl. Guard, Lieut. Col. L. J. F. Rooney, commanding officer plans to erect \$14,000 armory; 50x140 ft.; concrete floors. (Lately noted.)

Tex., Austin—Asylum—State Board of Control will receive bids until Nov. 2 to erect addition to buildings at State Insane Asylum, including plumbing, heating and lighting; plans and specifications from office of C. H. Page & Bro., Archts.

Hospitals, Sanitariums, Etc.

N. C., Wilmington—Dr. E. S. Bulluck will erect \$75,000 building; 3 stories and basement; fireproof; brick; 52x95 ft.; basement, 45x22 ft.; stores and offices on first floor; hospital to accommodate 30 patients above; Jas. B. Lynch, Archt.

Tenn., Knoxville—Eastern State Hospital, Dr. R. E. Lee Smith, Supt., will erect addition to chapel; bids opened Oct. 30.

Hotels.

Ala., Jackson—Mrs. Jno. Oliver will erect 20-room hotel; steam heat.

D. C., Washington—National Hotel Co., Geo. F. Calvert, Jr., Prest., 452 D St., N. W., will erect building to replace structure lately noted burned at 507 Pennsylvania Ave., N. W.; 150x200 ft.; cost about \$100,000.

Mo., Kansas City—Armour Building Co. will erect 9-story hotel at 515-19 E. Armour Blvd.; cost \$150,000.

Mo., Osceola—H. O. Smith, Springfield, contemplates erection of \$250,000 hotel in connection with summer resort on Osage River, near Osceola.

N. C., Azalea—Jno. G. Fitzgerald, Geo. Craig, Edw. N. Wright and others, Asheville, inceptd. with \$50,000 capital to erect inn near Azalea to be known as Boone Tavern; cost \$15,000.

Tenn., Ripley—Ripley Hotel Co. will erect \$150,000 hotel; 3 stories and basement; 75x100 ft.; brick, stone trim; Mann & Gatling, Archts., Scimitar Bldg., Memphis.

Tex., Corsicana—Ralph Beaton will erect 3-story brick annex to Hotel Beaton; 90x36 ft.; private baths; steam heat; 2 stores and sample rooms on first floor; cost \$40,000; H. O. Blanding, Archt.

Miscellaneous.

Fla., West Palm Beach—Bathing Casino—Gus' Baths, Gus Jordahn, Mgr., will erect additional 60 dressing rooms and 200 lockers to bathing casino.

Ky., Frankfort—Home—Dr. Jno. P. Stewart will erect \$25,000 dormitory at Stewart Home; 2 stories; 40x66 ft.; concrete; oak floors; composition roof; metal laths; natural gas; electric lights; hand power dumb waiters; Lee L. Oberwarth, Archt.

Md., Love Point—Resort—Love Point Resort Co., inceptd. with \$150,000 capital by David G. McIntosh, Jr.; Jno. W. Holloway and Arthur J. Watkins.

Mo., Joplin—Convention Hall—Chamber of Commerce is promoting erection of exposition and convention hall.

Mo., Verona—Resort—Thodehamel Industrial Development Co. contemplates expending \$350,000 to improve Rainbow Springs Country Club near Verona; erect \$10,000 clubhouse; Elston, Axon & Russel, Archts., Springfield; also provide artificial lake of 20 acres, swimming pool and airplane landing field.

N. C., Charlotte—Library—Law Library Assn., J. A. McCrae, Prest., will erect 2-story addition to building; 40x155 ft.; brick; cost \$50,000; bids opened; L. H. Asbury, Archt.

Tex., Houston—Undertaking Parlors—C. J. Wright & Co. will erect 2-story frame and stucco undertaking parlors at Louisiana and Bell Sts.; \$15,000.

Tex., Waco—Stables—Conyers Livestock & Feed Corp., Marlin, plans to establish main offices in Waco; erect number stables, etc.; Roy E. Lane, Archt., Chamber of Commerce Bldg., Waco.

Va., Lynchburg—Gymnasium—Mr. Geighenheimer will erect gymnasium to replace structure lately noted burned; metal ceilings; hardwood floors; bids until Nov. 1. Address Billy West, 1300 Main St. (See Machinery Wanted—Beaver Board; Stairway (Iron); Flooring.)

W. Va., Charleston—Clubhouse—Woman's Club of Charleston, Mrs. C. E. Rudesill, Chrmn. Comm., 1207 Virginia St., plans to erect clubhouse.

Railway Stations, Sheds, Etc.

Mo., St. Clair—St. Louis-San Francisco Ry., F. G. Jonah, Ch. Engr., St. Louis, will erect station; 1 story; 24x106 ft.; bids opened.

Okl., Oklahoma City—Missouri, Kansas & Texas Ry., Frank Ringer, Ch. Engr., St. Louis, will erect freight depot to replace structure lately noted burned; cost \$30,000; bids opened.

W. Va., Logan—Chesapeake & Ohio R. R., F. I. Cabell, Ch. Engr., Richmond, Va., will erect passenger station; 30x100 ft.; brick; terra cotta trim; slate roof; covered platforms; also erect 30x100 ft. frame baggage and express building; cost \$80,000; receiving bids. (Previously noted.)

Schools.

Fla., Fort Lauderdale—Broward County Board of Public Instruction will erect \$17,000 school; 4 rooms; hollow tile; composition roof; pine floors; bids opened Nov. 19; Morris Peterman, Archt. Address Jas. S. Richards, County Supt. (Lately noted.)

Fla., Gainesville—Baptist Boy's Club, J. B. Walker, Prest., Baker, will erect \$50,000 home for students at University of Florida; provide swimming pool, library, cafeteria, etc.

Ga., Americus—Sumter County School Board plans to erect building to replace Thompson School recently burned; 2 stories and auditorium; brick; \$20,000.

Ga., Cairo—Board of School Trustees, J. B. Wright, Chrmn., will erect \$70,000 school to replace structure lately noted burned; 26 rooms with auditorium to seat 750; brick or hollow tile; pine floors; contemplates bond election. Address W. B. Roddenbery Chrmn. Bldg. Comm.

Ga., Millen—Board of Education will erect \$20,000 school; 6 class rooms and auditorium; brick and frame; tin roof; pine floors; steam heat; Scroggs & Ewing, Archts. Lamar Bldg., Augusta. (Lately noted.)

Ky., Richmond—City Board of Education will erect \$100,000 high school; 20 rooms; brick and stone; oak floors; steam heat; electric lights; bids opened Oct. 24; C. C. & E. A. Weber, Archts., 3rd and Walnut Sts., Cincinnati, O. Address Jno. Howard Payne, Clerk, Bd. of Education, Richmond. (Lately noted.)

La., Cameron—School Board will rebuild Sells School damaged by fire; bids opened.

Md., Baltimore—Board of Awards, Mayor Wm. F. Broening, Prest., will receive duplicate bids until Nov. 9th, at office Richard Gwin, City Register, City Hall, for alterations to School No. 14, Linden Ave. and Wilson St.; drawings and specifications at office J. F. Crowther, Inspector of Buildings, City Hall.

Miss., Oxford—State Bond Improvement Commission, Theo. C. Link, Director of Public Works, P. O. Box 636, Jackson, will receive bids until Nov. 14 to erect fireproof chemistry building at University of Mississippi.

Miss., Union—Union Consolidated School Dist. does not contemplate \$10,000 bond issue as lately reported.

Mo., Jackson—Jackson School Dist. will vote Nov. 8 on \$15,000 bonds to complete high school. Address Dist. School Trustees.

Mo., Maryville—Northwest State Teachers College Board of Regents will erect \$200,000 dormitory; Rudolph Meier, Archt., St. Joseph.

Mo., Middle Grove—(R. D. From Mad-

ison)—Consolidated School Dist. Trustees will erect high school.

Mo., St. Louis—Board of Education, C. P. Mason, Secy., will erect junior high school, Hartford and Louisiana Aves.; 3 stories; 110x142 ft.; brick and reinforced concrete; cost \$200,000; R. N. Milligan, Archt.

N. C., Greensboro—Agricultural and Technical College for Negroes, M. C. S. Noble, Chrmn. Bldg. Comm., will receive bids until Nov. 15 for construction, plumbing and heating of proposed agricultural and auto-mechanics buildings; bids for each building separately and both jointly; drawings and specifications at office Harry Barton, Archt.

N. C., Swannanoa—Swannanoa Consolidated School Dist. Trustees will erect school; election Dec. 14 (extended date) on \$50,000 bonds. (Lately noted.)

N. C., Wilson—Wilson Graded School Dist. Board of Trustees, C. L. Coon, Supt. of Schools, will receive bids until Nov. 23 to erect high school; separate bids as follows: General Contract, installation heating and ventilating plant, plumbing, electrical work, equipment, construction outside walks and steps from street to terraces; drawings and specifications at offices Chas. C. Wilson, Archt., 105 Davis Bldg., Wilson, 208 First National Bank Bldg., Gastonia, N. C.; 804-7 Palmetto Bldg., Columbia, S. C.; also Builders Exchanges in Atlanta, Ga., Columbia, S. C., and Charlotte, N. C.; obtainable from architect at Columbia office. (Previously noted.)

N. C., Winston-Salem—City voted \$1,150,000 bonds, including \$1,000,000 to erect 3 schools for white pupils and additions to present structures; also erect central school for colored pupils. (Lately noted.)

Okl., Tahlequah—Department of Interior, Office of Indian Affairs, Chas. H. Burke, Commr., Washington, D. C., will receive bids until Nov. 3 to erect brick mess hall at Cherokee Training School; plans and specifications at office United States Indian Warehouses at Chicago, Ill., St. Louis, Mo., San Francisco, Cal., and Builders' Exchange, St. Paul, Minn., and office superintendent of Cherokee Orphan Training School, Tahlequah.

Okl., Tulsa—City Board of Education, Geo. McCurdy, Secy., will receive bids until Nov. 7 for furnishing materials and labor to close in and complete general contract work for addition to Central High School (structural frame work nearing completion); also receive bids until same date to erect one auditorium and two or more unit buildings for colored schools in Roosevelt Addition; plans and specifications at office Geo. Winkler, Archt., 414-15 Palace Bldg.

S. C., Lorris—Board of Trustees, District No. 18, Dr. D. Harrelson, Chrmn., will erect school; 10 rooms; brick; metal roof; wood floors; steam heat; cost 16,000.

S. C., Mauldin—Board of Education will erect Poplar Spring School; \$12,000 bonds voted; W. E. Murray, Intendant of town.

S. C., Newberry—Board of School Trustees, W. G. Mayes, Chrmn., will receive bids until Nov. 15 to erect negro school and addition to high school; former 50x130 ft.; 2 stories; brick and frame; shingle roof; latter, 30x80 ft.; 2 stories and basement; brick and frame; tar and gravel roof; steam heat; separate contracts for heating and plumbing; bids on each building separately and both jointly; plans and specifications at Builders Exchange, Columbia; obtainable at office Jas. C. Hemphill, Archt., Greenwood, or O. B. Cannon, Newberry. (Lately noted.)

S. C., Ravenels—Ravenels School Dist. No. 17 voted \$75,000 bonds to erect school. Address District School Trustees.

Tex., Corsicana—State Board of Control, Austin, will erect school at State Orphans' Home.

Tex., Creedmoor—Creedmoor Dist. Board of Trustees will erect \$13,000 school; 2 stories; 46x72 ft.; brick and frame; built up roof; metal ceilings; wire glass; steel sash and trim; edge grain pine floors; stoves; Gleescke & Harris, Archts., 406-08 Littlefield Bldg., Austin. (Lately noted.)

Tex., Fort Worth—Polytechnic Independent School Dist. Trustees will receive bids until Nov. 7 to erect ward school; building covers 4000 sq. ft.; brick; stone trim; floor construction of metal, lumber and reinforced concrete; separate bids for heating, plumbing and wiring; plans will be ready Nov. 21 for high school covering 15,000 sq. ft.; plans and specifications at office Clarkson & Gaines, Archts., 606-07 First Natl. Bank Bldg. (Lately noted.)

Tex., Fort Worth—Sagamore Hill Independent School Dist. Trustees will erect high school; Wm. C. Meador, Archt., Dan Waggoner Bldg.

Tex., Galveston—City Board of School Trustees, Chas. Fowler, Prest., will erect 2-story addition to West District negro school at 35th St. and Avenue M½.

Tex., Palestine—Palestine School Dist. Trustees will erect school; brick; probably tar and gravel roof; wood floors; cost \$27,500; also expend \$15,000 to repair and equip present structures. (Lately noted.)

Va., Lynchburg—Randolph Macon Woman's College Trustees will erect \$180,000 student building.

Va., Portsmouth—School Board will erect addition to Woodrow Wilson High School and Jefferson Street Annex; bids opened Oct. 31; separate bids for heating and ventilating; 8 rooms and auditorium and 16 rooms; cost \$50,000 and \$75,000; brick; tar and gravel roof; rift pine and concrete floors; rolling partitions; wire glass; hot air heat with fan, \$20,000; electric lights; Chas. M. Robinson, Archt., Times Dispatch Bldg., Richmond. (Lately noted.)

W. Va., Barboursville—Morris Harvey College will erect \$30,000 gymnasium.

W. Va., Matoaka—Board of Education, M. R. Dodd, Supt. of Schools will erect \$70,000 school; 2 stories and basement; brick; stone trim; H. M. LeRoy, Archt., Blusfield. (Previously noted.)

W. Va., Princeton—Board of Education, J. V. Woodson, Prest., will erect \$150,000 high school; 2 stories and basement; 60x190 ft.; brick; stone trim; Wyson & Jones, Archts., Princeton and Charleston.

Stores.

D. C., Washington—Adolph Gude will erect 3-story brick store at 1318 I St., N. W.; cost \$15,000.

D. C., Washington—S. H. Foster, 11th and M Sts., N. W., will alter store and apartment building; 2 stories and basement; 15x75 ft.; brick; C. Harry Miller, Archt., Archt., 700 10th St., N. W.

Fla., Palmetto—D. B. Whittle will erect business block on Lemon Ave.; 40x80 ft.; 2 stories; brick and tile; 2 stores on lower floor; 5 apartments above.

Fla., West Palm Beach—Co-operative Marketing Assn. will erect building on Datura St.; 1 story; 30x50 ft., footing 26x16 ft.; concrete and brick; slate surface composition roof; concrete and rock floors.

Ga., Athens—Eberhart & Scott Co. will

erect \$50,000 to \$75,000 building at Washington and Lumpkin Sts.

Ky., Louisville—B. Bernheim will erect addition to Bernheim Building, 638-40 S. 4th St.; 2 stories; 60x140 ft.; cost \$150,000; Joseph & Joseph, Archts., Atherton Bldg.

Mo., Kansas City—Lloyd Medes, 514 Reliance Bldg., will erect 2-story and basement store and office building; 50x100 ft.; brick and stone; McKecknie & Trask, Archts., 719 Lloyd Bldg.

Mo., St. Louis—Chas. Rosemeyer, 3905 Lee Ave., will erect store and apartment building; 2 stories; 27x40 ft.; brick and stucco; cost \$20,000; Chas. Breitschuh, Archt., 3508A Humphrey St., will revise plans and take new bids. (Lately noted.)

Mo., St. Louis—Victoria H. Grollneck purchased property at 1125 Locust St. and will expend \$100,000 to reconstruct for store and offices; leased through office Sam Hamburg, Jr., Real Estate & Investment Co. to Martin-Breit Estate Co. and Mercantile Trust Co.

Mo., St. Louis—David Caffarata will erect building at 6700 Delmar Ave., for store, cafe and 20 apartments; 85x75 ft.; 3 stories; fireproof; brick and concrete; flat slab floor construction; cost \$150,000; J. D. Paulus, Archt., 4729 Northland Ave.

S. C., Lancaster—I. S. Rainwater will erect block of brick stores on Evans St.

Tenn., Memphis—Fortunes, Inc., Harry Tatune, Mgr., Belvidere and Union Sts., will erect \$40,000 store; 2 stories and basement; 50x75 ft.; brick; stone trim; Mahan & Broadwell, Archts., American Bank Bldg.

Tex., Corsicana—J. S. Murchison and E. M. Polk, will erect pressed brick and plate glass front brick business building; 2 stories; cost \$12,000.

Tex., Houston—J. W. Scott will erect 1-story brick and concrete store at Hutchins and Sternberg Sts.; costs \$10,000.

Tex., Sweetwater—Granville and Guy Morris will erect 2 brick and concrete business buildings on East North Second St.; 25x80 and 55x125 ft.

Va., Lynchburg—H. L. Tomlinson, Philadelphia, Pa., is reported to erect building at 8th and Church St.

Va., Richmond—L. J. Haynes will erect brick building at 2916 North Ave.; cost \$11,300.

Theaters.

Ark., Parkin—I. R. Dye will erect \$20,000 theater and store building; 1 story and basement; 60x90 ft.; brick; stone trim; Chas. Deas, Archt., Goodwyn Institute, Memphis, Tenn.

Ky., Danville—Malcolm Weisger will erect \$50,000 moving picture theater; 2 stories; 50x120 ft.; brick; stone trim; mill floor and roof

construction; Joseph & Joseph, Archts., Atherton Bldg., Louisville.

Ky., Lexington—M. Switow and Wm. James are reported to erect \$200,000 theater and office building; 3 stories and basement; 65x200 ft.; fireproof; brick and reinforced concrete; stone trim; slab roof and floor construction; Joseph & Joseph, Archts., Atherton Bldg., Louisville. (Lately noted.)

Md., Baltimore—Govans Amusement Co., Inc. will erect \$65,000 theater; 48x140 ft.; brick, stone, steel and concrete; composition or slag roof; tile and concrete floors; Oliver B. Wight and E. A. Lockhart, Archts., 1101 Munsey Bldg., Baltimore.

Md., Chestertown—Walter C. Pippin, 205 Washington St., is preparing plans for \$30,000 moving picture theater, store and apartment building; 2 stories; brick.

Va., Danville—Southern Amusement Co. will erect \$150,000 theater, store and office building; 59x187 ft.; brick and frame; ornamental terra cotta; metal ceilings; interior tile; tar and gravel roof; wire glass; wood floors; ventilators; bids opened Nov. 5; C. K. Howell, Archt., 35 Poplar St. Address J. C. Hester, Box 86. (Lately noted.)

Warehouses.

Fla., Vero—Redstone Lumber & Supply Co. will erect warehouse to replace structure lately noted burned; 60x100 ft.; 1 story; probably tile; concrete floors.

Ky., Shelbyville—Star Warehouse Co. will erect \$35,000 tobacco warehouse to replace structure lately noted burned; 170x320 ft.; steel frames; galvanized iron roof; concrete floors; steel sash and trim; bids opened. Address D. T. Long.

Mo., Kansas City—Perky Bros. Transfer & Storage Co. will erect \$90,000 storage building; 60x110 ft.; 6 stories; flat slab reinforced concrete and hollow fireproof tile; cement floors; metal doors; rolling partitions; steel sash and trim; safes; hot air heat; electric lights; freight elevator 8x18 ft.; bids opened; Clifton B. Sloan, Archt., 321 E. 11th St. (Lately noted.)

Mo., Macon—Farmers Produce Exchange, Otto Will, Prest., will erect warehouse and office building.

S. C., Florence—Howard Cannon will erect tobacco warehouse noted burned at loss of \$15,000.

Tex., Dallas—G. L. Foord will erect 3-story brick warehouse at 3401-7 Commerce St.; cost \$35,000.

Tex., Orange—Gulf Production Co. will erect warehouse.

Va., Norfolk—City plans election on \$5,000,000 bond issue to develop waterfront; expend \$1,100,000 for warehouses in connection; Barton Myers, Chrmn. Port Commission; Folwell-Ahiskgo Co., Constr. Engr., 322 S. Michigan Ave., Chicago.

BUILDING CONTRACTS AWARDED

Apartment Houses.

D. C., Washington—Frank P. Milburn will erect 8-story apartment house on 16th St., between K and L Sts.; fireproof; Milburn, Helster & Co., Archts.; Jas. L. Parsons, Jr., Contr., Southern Bldg.

Fla., Lake Worth—F. Johnson, Palm Beach, will erect apartment house and garage on Q St., nr. 9th; 20 rooms and 4 sun parlors; H. E. Szember, Contr., Lake Worth.

Okla., Oklahoma City—S. M. Cooper, 705 Colcord Bldg., will erect \$15,500 apartment

house; 40x51 ft.; frame and brick veneer; pitch and gravel roof; oak floors; pipeless furnace; C. J. Hancox, Archt.; E. C. Ross, Contr. (Lately noted.)

Tenn., Memphis—John T. Marshall will erect \$300,000 apartment house at Poplar Ave. and Granville Pl.; reinforced concrete and brick; fireproof; plaster and metal lath; hardwood floors; 90x112 ft.; 6 stories; 41 suites; R. L. Sieg, Archt., Randolph Bldg.; Gude & Co., Contrs., Atlanta, Ga. (Lately noted.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Fla., West Palm Beach—Mrs. Emily L. Rapp, Chicago, is erecting duplex apartment house and garage; both 2 stories; frame and stucco; imitation stone columns; Gene Bartholomew, Archt.-Contr.

Association and Fraternal.

Md., Cumberland—Salvation Army will erect \$35,000 building on N. Mechanic St.; 3 stories; 36x100 ft.; brick; T. W. Biddle, Archt.; John I. Vandergriff, Contr.; Sell Bros., contrs. for concrete foundation; John B. McFarlane, contr. for plumbing.

S. C., Clinton—Masonic Lodges, B. H. Boyd, Prest. of building company, will erect \$40,000 temple on S. Broadway St.; brick; 2 stories; 2 store rooms and theater on first floor; lodge rooms above; Casey & Fant, Archts., Anderson; Charles Round Const. Co., Contr., Clinton.

Bank and Office.

Fla., Haines City—Haines City Bldg. Co. will erect \$70,000 building for bank, offices, stores and hotel; 3 stories; 75x138 ft.; brick; built-up roof; tile, wood and concrete floors; ornamental terra cotta; interior tile; metal doors; vault lights; ventilators; steel sash and trim; Francis J. Kennard, Archt., Tampa; W. C. Robertson & Co., Contrs., Haines City. (Lately noted.)

Ga., Atlanta—Dr. W. Troy Bivings will expend \$20,000 to convert building into store and office building; 3 stories and basement; ordinary construction; composition roof; wood and tile floors; A. Ten Eyck Brown, Archt.; R. M. Walker Co., Contr. (Lately noted.)

N. C., Charlotte—Blythe Bros., Sterling Graydon, John Wier, Scott Charley Co., B. A. Powell, H. B. Heath and Southeastern Const. Co. will erect \$45,000 office building; 35x175 ft.; brick; Barrett roof; wood and tile floors; steam heat; city lights; Louis H. Asbury, Archt.; Southeastern Const. Co. Contr.

N. C., Fayetteville—Huske Building Corp. will erect \$100,000 building on Hay St.; 5 stories; 80x74.6 ft.; semi-fireproof; built-up roof; concrete, tile and hardwood floors; heating plant, \$10,000; passenger elevator, \$7,500; hollow fireproof tile; metal ceilings; plaster board; ornamental terra cotta; safes; interior tile; metal doors; wire glass; mail chutes; ventilators; steel sash and trim; Stiles S. Dixon, Archt.; T. T. Thain, Contr. (See Machinery Wanted—Elevators; Elevator Guards.)

Churches.

La., Houma—Methodist Episcopal Church will erect \$20,000 building; W. J. Quick, Contr., Lake Charles.

N. C., Asheville—West Asheville Presbyterian Church will erect \$17,000 building; W. V. Henry & Co., Contrs.

Tex., Mexia—First Baptist Church, W. A. Buckner, Chrmn. Bldg. Comm., will erect \$75,000 building; C. W. Bulger & Son, Archts.; W. G. Barnes, Contr., both Dallas. (Previously noted.)

City and County.

Fla., Tampa—Servants' Quarters—City will expend \$10,000 to renovate servants' quarters; Logan Bros., Contrs.

Fla., West Palm Beach—Jail—City Comsn. will erect \$10,000 jail; 1 story; concrete; 35x48 ft.; E. H. Barto, Contr. (Previously noted.)

N. C., Tryon—Home—Polk County will erect county home; J. T. Green, Contr.

Tenn., Johnson City—Library—Library Board will erect Mayme Williams Library; cost \$38,500; concrete and brick; stone foundation; artificial stone trim; James Construction Co., Contr., Elm St. and Southern Railroad. (Lately noted.)

Tenn., Nashville—Fire Hall—City will erect \$38,714 fire hall; 2 stories; 65x150 ft.; brick; built-up composition roof; concrete floors; plaster board; wire glass; ventilators; steel sash and trim; B. J. Hodge, Archt., 165 4th Ave., N.; T. J. Christman & Co., Contrs., 514 Broad St.; all material purchased. (Lately noted.)

Courthouses.

Tenn., Nashville—Davidson County will erect addition to jail and criminal court; cost \$28,300; 3 stories; 39x60 ft.; brick; built-up composition roof; reinforced concrete floors; vacuum heating system, \$1500; interior tile; wire glass; ventilators; Asmus & Clark, Archts., 634 Stahlman Bldg.; T. J. Christman & Co., Contrs., 514 Broad St.; all material purchased. (Lately noted.)

Dwellings.

Ark., Little Rock—S. P. Scott will erect \$24,000 residence at 2020 Arch St.; 8 rooms; brick veneer; William Peterson, Contr.

D. C., Washington—Thos. R. Riley will erect 5 dwellings; cost \$5500 each; 7 rooms; brick; slate roofs; maple and hardwood floors; hot water heat; gas and electric lights; Wm. P. Cissel, Archt.; Wm. Morris, Contr. (Lately noted.)

Fla., Daytona—T. T. McDonald will erect 9-room residence on Foote St.; Williams & Lyman, Contrs.

Fla., Lake Worth—Mrs. Ella Wright will erect 13-room residence and 4-room apartment house; John Walls, Contr., West Palm Beach.

Fla., West Palm Beach—Porte Quinn is erecting 2-story residence on Jefferson Rd. between Dixie Highway and Olive St.; rough stucco; Gene Bartholomew, Contr.

Ga., Atlanta—D. C. Black will erect \$23,000 residence at 64 E. 15th St.; brick veneer; Adair & Senter, Contrs.

La., New Orleans—Mutual B. & H. Assn. will erect \$11,000 duplex dwelling at Elk and Vincent Sts.; S. F. Perrin, Contr.

Okl., Oklahoma City—Dr. E. S. Lain will erect \$12,000 residence; brick veneer; asbestos slate roof; oak and concrete floors; hot air furnace; city electric lights; interior tile; Bailey & Alden, Archts.; F. M. Ray, Contr. (Lately noted.)

S. C., Gaffney—R. S. Lipscomb is erecting 11-room residence at Petty St. and Rutledge Ave.; L. L. Hunter, Archt., Charlotte, N. C.; Day & Kloeckler, Contrs., Greenville, S. C.

Tenn., Memphis—Colonial Trust Co. will erect 2 dwellings at 1855 Walker Ave. and 257 Angelus Pl.; 5 rooms; brick veneer; cost \$10,000; heating plants, \$500 each; J. B. Moody, Contr.

Tex., Austin—Ben. M. Barker will erect \$35,000 residence on Duval St.; 2 stories;

brick veneer and hollow tile; 50x60 ft.; H. F. Kuehne, Archt., 824 Littlefield Bldg.; Scott Yeamans, Contr.; John L. Martin, 406 Congress Ave., contr. for plumbing and electrical work.

Tex., San Antonio—San Antonio Development Co. will erect 2 dwellings on Hollywood Pl.; cost \$10,000 each; Ralph H. Cameron, Archt.; Chas. Webb, Contr.

Tex., Victoria—St. Mary's Catholic Church will erect \$10,000 rectory at Main and Convent Sts.; brick; Eugene Tuttle, Contr.

Va., Richmond—John W. Williams will erect 3 dwellings; cost \$45,000; 2 stories and basement; brick; slate, tile and tin roof; oak and pine floors; hot water heat, \$2400; electric lights, \$330; Marcellus Wright, Archt.; Davis Bros., Inc., Contrs., 2510 W. Main St. (Lately noted.)

Dwellings.

La., New Orleans—Phoenix B. & H. Assn. will erect 3 double dwellings at St. Maurice and St. Claude Sts.; cost \$14,574; Lina Delerosa, Contr.

N. C., Lenoir—Lee Hayes has contract to erect 3 cottages.

S. C., Gaffney—R. S. Lipscomb will erect \$14,000 residence at Petty St. and Rutledge Ave.; 11 rooms; 42x42 ft.; weatherboard; shingle roof; L. L. Hunter, Archt., Charlotte, N. C.; Day-Kloeckler Bldg. Co., Contr., Greenville, S. C.

Tex., Corsicana—B. A. Crofford will erect residence; contract let.

Tex., Corsicana—H. G. Brown will erect residence; contract let.

Tex., Corsicana—E. E. Babers will erect residence; contract let.

Tex., Corsicana—Max D. Almond will erect 8 dwellings on W. 13th Ave.; contract let.

Tex., Corsicana—C. S. Stroud will erect dwelling; contract let.

Tex., Corsicana—W. F. Montfort will erect residence; contract let.

Tex., Corsicana—A. J. Wareing will erect 3 dwellings on W. 7th Ave.; contract let; unimate plans provide for 30 dwellings.

Hospitals, Sanitariums, Etc.

Fla., Tampa—Plant Park Infirmary will expend \$10,000 to repair building; Logan Bros., Contrs.

La., Pineville—Board of Commrs. of Louisiana Hospital for Insane will erect 3 two-story brick dormitories, each to accommodate 110 patients; also erect dining hall; J. W. Smith, Archt., Monroe; W. J. Quick, Lake Charles, contr. for 3 dormitories at \$231,000; W. A. Prather, Baton Rouge, contr. for dining hall at \$201,300. (Lately noted.)

Hotels.

Md., Frederick—Frederick Hotel Co. will erect \$500,000 hotel; 6 stories; steel frame; hollow fireproof tile; interior tile; concrete with pitch or Barrett roof; concrete and hardwood floors; ornamental terra cotta; metal doors; wire glass; mail chutes; ventilators; safes; vacuum heat; 1 freight and 2 passenger elevators; Frederick Webber, Archt., 403 Morris Bldg., Philadelphia; construction on fee basis; all contracts made with owner. Address Jno. S. Hershey, Contr., Stephen Girard Bldg., Philadelphia. (Lately noted.)

N. C., High Point—O. Arthur Kirkman will remodel Belview Hotel; C. M. Thomas & Co., Winston-Salem, contr. for plumbing and heating; cost \$10,000 to \$12,000.

Miscellaneous.

Md., Baltimore—Home—Women's Home

Missionary Society of M. E. Church will erect Wo-Ho-Mis Lodge; cost \$50,000; 4 stories; brick and stone; slag roof; hardwood floors; hot water heat; electric lights; Hicks, Tase & Norris, Contrs., 106 W. Madison St. (Previously noted.)

Va., Princess-Clubhouse—Lynnhaven Country Club, D. H. Goodman, Chrmn. Bldg. 127 Granby St., Norfolk, will erect \$42,200 clubhouse; 1 and 2 stories; 40x160 ft.; Calrow, Wrenn & Tazwell, Archts., Monroe Bldg.; B. B. Spigel, Asso. Archt., 112 Main St.; Seay Bros., Contrs., 24th St. and Colonial Ave., all Norfolk. (Lately noted.)

Railway Stations, Sheds, Etc.

Tex., Poth—San Antonio & Aransas Pass. Ry. Co. L. Andrews, Ch. Engr., Yoakum, will erect combination passenger and freight depot; 20x115 ft.; hollow tile; asbestos-cement shingle roof; pine floors; safes; stoves; Will A. Orth, Contr., 311 Gibbs Bldg., San Antonio. (Lately noted.)

Schools.

Ala., Bessemer—City Board of Education, Milton J. Brooks, Prest., 1615 Berkley Ave., will erect 6-room addition to Vance School; brick; tar and gravel roof; pine and concrete floors; rolling partitions; metal ceilings; steel sash and trim; ventilators; addition to steam heating plant; electric lights; cost \$15,500; D. O. Whildin, Archt.; Inglenook Construction Co., Contr., both Birmingham. (Lately noted.)

Ala., Birmingham—Alabama State Training School for Girls will erect three 2-story fireproof buildings; concrete veneer; each structure to accommodate 28; Earl Kline, Contr. (Lately noted.)

Ga., Statesboro—City, J. F. Renfroe, Mayor, will erect high school; brick and hollow tile; tin roof; wood floors; 1-pipe steam heating system; cost about \$75,000; Irvin, Archt., Lamar Bldg., Augusta; C. W. Cooper & Co., Contr., Athens. (Lately noted.)

Mo., Carthage—Board of Education, Nora Johnson, Secy., will erect Benton School;

2 stories and basement; cost \$75,000; Percy K. Simpson, Archt., Carthage; J. I. Zollars, Contr., Independence, Kans.

N. C., Durham—City Board of Education will erect 2-story brick and concrete graded school; also 3-story brick and concrete high school; Milburn, Heister & Co., Archts., Washington, D. C. and Durham; Salmon, Shipp & Poe, Durham, contrs., at \$434,792 for both buildings. (Lately noted.)

N. C., Raleigh—Building Committee, State School for Blind, R. S. Busbee, Chrmn., will erect superintendent's residence, addition to administration building; 3 cottages, boiler house and laundry building; also tunnels connecting buildings; Jas. A. Salter, Archt., Raleigh; Carolina Construction Co., Hamlet, contr. at \$279,400. (Lately noted.)

Tenn., Cleveland—Bradley County School Board, Lee McDavis, Chrmn., will erect addition to community high school to consist of gymnasium, locker and shower rooms and 5 classrooms; 52x126 ft.; 2 stories and basement; semi-fireproof; face brick walls; steel girders; composition roof; hardwood floors; plaster board; direct-indirect steam heat; cost \$35,000; Clarence T. Jones, Archt., James Bldg., Chattanooga; R. E. White, Contr., Cleveland. (Lately noted.)

Stores.

Fla., Palmetto—C. F. Snyder will erect \$17,000 business building; 100x100 ft.; brick and tile; built-up roof; wood floors; electric lights; C. L. Miles, Archt. and Contr.; all material purchased except plate glass, metal ceilings, metal doors, rolling partitions, wire glass, steel sash and trim, and ventilators. (Lately noted.)

Fla., Tampa—Mrs. Eva Wolfson will erect \$30,000 store at 1625-9 7th Ave.; 1 story; 70x80 ft.; steel and brick; Barrett roofing; cement floors; electric lights; F. J. Kennard, Archt.; G. A. Miller, Contr. (Lately noted.)

Ga., Atlanta—Walter G. Cooper will erect 3-story store and office building at Spring and Luckie Sts.; brick; Jno. F. Downing, Archt.; Hugh S. Roberts, Inc., Contr.

S. C., Great Falls—Republic Cotton Mill will erect 24 store buildings; 22x60 to 22x80 ft.

each; brick and hollow fireproof tile; tar and gravel roof; cement, tile and hardwood floors; interior tile; ornamental terra cotta; metal ceilings; steel sash and trim; plate glass fronts; electric lights; water-works and sewerage; J. E. Sirrine & Co., Archts.; Potter & Shackelford, Contrs., both Greenville; also erect 25 bungalows. (Lately noted.)

Tex., Currie—M. Currie will erect 2-story brick building; first floor, drug store; upper floor, telephone exchange; contract let.

Tex., Port Arthur—M. Aquilina will erect \$23,000 store and office building; lately noted; 50x80 ft.; 2 stories; brick; Barrett roofing; wood floors; C. L. Wignall, Archt., Barnes Bldg.; Allen & Evans, Contrs., Merchants State Bank Bldg. (See Machinery Wanted—Concrete Mixer.)

W. Va., Richmond—Purtz & Hicks will erect 2-story concrete building on Main St.; Boso Bros., Contrs.

Theaters.

Va., Portsmouth—Pertibalon Development Corp. (controlled by Karincholas Bros.) will erect picture theater on High St.; 1 story; 35x170 ft.; tapestry brick front; cost \$18,000; Jones-Spear Co., Contr.

W. Va., Shinnston—Miss Lynne Monroe will erect \$20,000 motion picture theater on Bridge St.; 60x30 ft.; seating capacity, 800; E. J. Wood, Archt., Clarksburg; M. C. Shinn, Contr., Shinnston.

Warehouses.

D. C., Washington—Security Storage Co., C. A. Aspinwall, Prest., 1140 15th St., N. W., will erect addition, 1142-46 15th St.; brick and concrete; Nathan Wyeth, Archt., 1517 H St., N. W.; T. W. Marshall, Engr., 728 15th St., N. W.; W. P. Lipscomb & Co., Contrs., 1405 F St., N. W. (Lately noted.)

Ga., Atlanta—Stein & Co., 329 Decatur St., will erect \$50,000 warehouse; 3 stories; 50x238 ft.; slow burning mill construction; tar and gravel roof; wood floors; metal doors; steel sash and trim; Otis elevators; Lockwood & Poundstone, Archts.; Foundation Co., Contr. (Lately noted.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Beaver Board.—Billy West, 1300 Main St., Lynchburg, Va.—Sixty squares of Beaver Board. (See Buildings Proposed—Miscellaneous.)

Boilers.—Dist. Engr., Mississippi River Dredging Dist., Box 1017, Memphis, Tenn.—Bids until Nov. 16 to furnish and deliver 2 water tube boilers for U. S. dredge Beta and 3 water tube boilers for U. S. dredge Henry Flad; information on application.

Boiler.—R. P. Johnson, Wytheville, Va.—Dealers prices on Economic type return tubular boiler of 40 to 50 H. P., good second-hand condition, complete with usual equipment.

Boilers.—Central Missouri Coal & Mining Co., 314 Central Trust Bldg., Jefferson City, Mo.—Prices on boilers for coal mines. (See Construction News—Coal Mines and Coke Ovens.)

Bottling Machinery.—Lyons Bros. Co., W. J. Lyons, Prest., Dallas, Tex.—Names and addresses mfrs. of and dealers in bottling machinery for vinegar and blueing plant. (See Construction News—Miscellaneous Factories.)

Bottles.—Lyons Bros. Co., W. J. Lyons, Prest., Dallas, Tex.—Names and addresses mfrs. of and dealers in bottles for vinegar and blueing. (See Construction News—Miscellaneous Factories.)

Brass and Zinc.—Valley Mfg. Co., Chattanooga, Tenn.—12 x 14-in. brass and zinc sheets, about 28 gauge.

Brick (Cement) Making Machinery.—R. W. Johnson, 732 Westover Ave., Norfolk, Va.—Names and addresses mfrs. of cement brick making mch. also data on mfr. of bricks, etc.

Bridge Construction Materials.—Cocke County Pike Comsn., A. E. Simerly, Secy., Newport, Tenn.—Correspondence with bridge contractors or furnishers of bridge material.

Bridge Construction.—Whitfield County Comms., H. J. Wood, Chrmn., Dalton, and Murray County Comms., W. D. Wilbanks, Chrmn., Chatsworth, Ga.—Bids until Nov. 12 to build county line bridge over Sugar Creek; plans, etc., on file in office of ordinaries of Whitfield and Murray counties.

Bridge Construction.—Washington County, Jerome Reynolds, Secy., Hamilton & Shreve, Engrs., Fayetteville, Ark.—Bids until Nov. 7 at office of Hamilton & Shreve, Engrs., to build 10-ft. steel bridge with concrete abutments over town branch; plans, etc., on application to Engrs. (See Construction News—Bridges, Culverts and Viaducts.)

Bridge Construction.—Virginia State Highway Comsn., 116 S. Third St., Richmond, Va.—Bids until Nov. 9 to build steel and concrete bridge on Dry Creek on State

Road No. 10, between Jonesville and Rose Hill in Lee County; Va. Project 122; plans, etc., on file at Richmond, and with J. D. Keeler, Engr., Bristol, Va. (See Construction News—Bridges, Culverts and Viaducts.)

Bridge Construction.—Virginia State Highway Comsn., 116 S. Third St., Richmond, Va.—Bids until Nov. 9 to build steel and concrete bridge over Horse Pasture Creek and steel and concrete bridge over Mayo Creek; both on State Road No. 12 between Five Forks and Patrick county line in Henry County; Va. Projects 113 B and 113 C; plans, etc., on file at Richmond, and with R. D. Bryant, Resident Engr., Roanoke, Va.

Brick (Fire).—L. K. Moss, 728 Peyton St., Birmingham, Ala.—Data on mfr. of fire brick.

Brooms, etc.—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids opened Nov. 8 to deliver corn brooms, steel and sheave pins to Navy Yard, Charleston, S. C.

Building Machinery.—G. M. Randall, Box 641, Daytona Fla.—Data and prices on building machinery. (See Construction News—Land Development.)

Building Supplies.—Carolina Building Material Co., Box 23, Asheville, N. C.—To represent mfrs. of face and building brick, tile, lumber, hardware, electrical fixtures, composition and other roofing, sash, doors, etc.

Canning Machinery.—W. J. Walker, Savan-

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nah, Ga.—Names and addresses mfrs. canning machinery for cane syrup. (See Construction News—Canning and Packing Plants.)

Canning Machinery.—Hugh E. Weightman, 3429 Parker Ave., Chicago, Ill.—To correspond with mfrs. of canning mchy. for canning peas, corn, string beans, tomatoes, etc.

Calendars, etc.—W. Hall Moss, Dayton, Tenn.—To correspond with mfrs. of calendars and calendar pads, to be assembled and printed by job printers.

Casing.—Utoka Petroleum Corp., D. G. Powell, Bliss Bldg., Tulsa, Okla.—Prices on casing.

Charcoal, etc.—L. K. Moss, 728 Peyton St., Birmingham, Ala.—Mchy. for mfrs. of charcoal and wood alcohol.

Clothing Magazine.—P. C. Rodwell, 139 Broughton St., Orangeburg, S. C.—Names and addresses publishers of magazines devoted to shirt or clothing enterprises.

Cold Storage Plant.—W. B. Henry, Taboro, N. C.—To correspond with mfrs. of equipment for 10,000 bbl. capacity cold storage plant. (See Construction News—Ice and Cold Storage Plants.)

Concrete Mixer.—Allen & Evans, Merchants State Bank Bldg., Port Arthur, Tex.—Concrete mixer of 8 cu. ft. or 1 sack capacity.

Ditch.—Muhlenberg County Drainage Commrs., Greenville, Ky.—Bids until Nov. 15 to construct drainage ditch, 105,067.7 cu. yds. excavation clearing 65.83 acres of right way, build 3 bridges, estimated cost \$33,900.84.

Drainage.—Jefferson County Commrs. of Drainage Dist. No. 6, Beaumont, Tex.—Bids until Nov. 15 to construct following drainage ditches, North Fork of Taylor's Bayou and its laterals, Pevito Bayou, Willow marsh, Burrels gulley and ditch No. 17; total excavation 2,107,142 cu. yds.; plans with Drainage Commrs., Temperance Bldg. or C. L. Sherer, Engr.

Drainage.—Ellsbery Drainage Dist., W. T. Loggins, Prest., Greenwood, Miss.—Bids until Nov. 10 to construct 1.28 mi. canal; 26,806 cu. yds. excavation; Eli Abbott, Jr., Engr. (See Construction News—Drainage.)

Dredging.—U. S. Engr. Office, Baltimore, Md.—Bids until Nov. 28 to dredge harbor at Baltimore, Md.; information on application.

Drilling (Well) Machine.—R. P. Johnson, Wytheville, Va.—Dealers prices on well drilling machine, complete with tools, capacity not less than 300 ft. nor over 400 ft., ready for operation; second-hand if in good condition.

Drilling (Well) Machinery.—G. M. Randall, Box 641, Daytona, Fla.—Data and prices on well drilling machinery. (See Construction News—Land Development.)

Engines.—H. Eberman Light Plant, Morgantown, Ky.—50 H. P. used crude oil engine to drive alternator; 9x12-in. used Skinner automatic steam engine, good running condition.

Engines.—Central Missouri Coal & Mining Co., 314 Central Trust Bldg., Jefferson City, Mo.—Prices on engines for coal mines. (See Construction News—Coal Mines and Coke Ovens.)

Elevator Guards.—Huske Building Corp., Fayetteville, N. C.—Elevator guards. (See Contracts Awarded, Bank and Office.)

Elevator.—Huske Building Corp., Fayetteville, N. C.—Passenger elevator. (See Contracts Awarded, Bank and Office.)

Elevators (Hydraulic).—Vicksburg Furniture Mfg. Co., Vicksburg, Miss.—Names and addresses mfrs. of hydraulic elevators.

Engines.—John G. Duncan Co., Jackson

and Central Sts., Knoxville, Tenn.—Dealers priceson 100 or 125 H.P. second-hand or rebuilt Corliss engines; also 100 to 125 H.P. Corliss engine direct connected to 100 K.W. generator.

Flooring.—Billy West, 1300 Main St., Lynchburg, Va.—Two thousand ft. of flooring. (See Buildings Proposed—Miscellaneous.)

Gas Engines.—Utoka Petroleum Corp., D. G. Powell, Bliss Bldg., Tulsa, Okla.—Prices on gas engines.

Gas Mantle Machinery.—Hugh E. Weightman, 3429 Parker Ave., Chicago, Ill.—To correspond with mfrs. of mchy. for making gas mantles on a production basis.

Heating Equipment.—Tas-Te Fruit & Canning Co., Paul R. Fredericks, Prest., Treas. and Gen. Mgr., 191 Market St., Paterson, N. J.—Oil, gasoline or electric heating equipment for use in canning plant; cold pack process. (See Construction News—Canning and Packing Plants.)

Heating Plant.—Board of Public Instruction, J. E. Knight, Secy., Tampa, Fla.—Bids until Nov. 5 to install heating system in George Washington Junior High School, Michigan and Mitchell Aves.; plans and specifications at office Mr. Knight.

Heating Plant.—C. A. Short, Shinnston, W. Va.—Prices on heating plants. (See Buildings Proposed, Dwellings.)

Heating Plant.—State Board of Control, Austin, Tex.—Bids opened Nov. 2 for heating plant for State Colored Deaf and Dumb Institute; plans and specifications from office of C. H. Page & Bro., Archts., Austin.

Ice Plant.—Ft. Payne Ice Co., A. A. Miller, Mgr., Ft. Payne, Ala.—Mchy. for ice making plant. (See Construction News—Ice and Cold Storage Plants.)

Ice Cream Machinery.—Imperial Ice Cream Co., W. M. B. Sine, Director, Clarksburg, W. Va.—Bids until Nov. 10 for ice cream machinery. (See Construction News—Miscellaneous Factories.)

Ice Manufacturing.—L. K. Moss, 728 Peyton St., Birmingham, Ala.—Data on mfrs. of ice.

Laundry Machinery, etc.—J. W. Powell, Propr., Ideal Laundry, E. McEee Ave., Greenville, S. C.—Laundry and dry cleaning mchy. (See Construction News—Miscellaneous Enterprises.)

Lighting Fixtures.—Treasury Dept., Supvg. Archt's Office, Washington, D. C.—Bids until Nov. 14 to furnish and install lighting fixtures in U. S. Treasury Bldg. at Washington; plans on file.

Lithographers.—W. Hall Moss, Dayton, Tenn.—To correspond with engravers and lithographers who do work at the trade.

Locomotive.—John G. Duncan Co., Jackson and Central Sts., Knoxville, Tenn.—Prices on rebuilt and good second-hand 24 ton standard gauge locomotive, Shea preferred; immediate delivery; also prices on other makes.

Locomotive.—M. K. Frank, Frick Bldg., Pittsburgh, Pa.—42-in. gauge Climax or Shay geared locomotive, weight from 15 to 20 tons.

Lumber.—H. B. Vaughan, Prest. Board of Supvgs., Natchez, Miss.—Bids until Nov. 8; 2 carloads bridge lumber; pine or oak, size 2½x8-in., 16 ft. long; ½ carload, 2½x12-in., 18 or 20 ft. long; all must be 90 per cent heart; delivery f. o. b. Natchez.

Mats (Door) and Rugs.—J. H. Stoltzfus, Secy., Victoria County Fair Assn., Victoria, Tex.—Names and addresses mfrs. of mchy. for making door mats and rugs.

Mechanical Drawing Equipment, etc.—Dist. Commrs., Room 509 Dist. Bldg., Washington, D. C.—Bids until Nov. 21 to furnish domestic science and mechanical drawing equipment for school use; for information apply to Room 320, Dist. Bldg.

Mechanical Equipment, etc.—Treasury Dept., Supvg. Archt's Office, Washington, D. C.—Bids until Nov. 22, for construction; mechanical equipment; kitchen equipment; steam sterilizers; hydraulic passenger elevator; pumping plant, etc. for extensions to Administration Building, and construction of semi-ambulant quarters, attendants' quarters, laundry and garage for U. S. Public Health Service Hospital at Rutland, Mass.; plans on file.

Mining Machinery.—Central Missouri Coal & Mining Co., 314 Central Trust Bldg., Jefferson City, Mo.—Data and prices on mining mchy., conveyors, etc. for 10 to 12 car daily capacity coal mine. (See Construction News—Coal Mines and Coke Ovens.)

Miscellaneous Supplies.—Norfolk & Western Ry. Co., J. H. Clemitt, Purchasing Agt., Roanoke, Va.—Bids until Nov. 2; Electrical material; 300 rods wire fencing; 2500 steel ties; 10 steel ship building channels; 200 bars reinforcing steel; 90,000 lbs. welding and threading steel 7500 steel switch plates; information on application.

Miscellaneous Supplies.—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids until Nov. 8 to deliver ap; lifers; steel and wooden tanks; counterbalance springs; brass, steel and gyro gear boxes to navy yard; plans on file.

Mixer (Concrete).—R. P. Johnson, Wytheville, Va.—Dealers prices on late model self loading, ¾ yd. Smith concrete mixer, good second-hand condition.

Mops (Floor).—Roles Mfg. Co., Inc., 120 W. 24th St., Norfolk, Va.—To correspond with mfrs. of oil floor mops.

Oil Field Equipment.—Utoka Petroleum Corp., D. G. Powell, Bliss Bldg., Tulsa, Okla.—Prices on oil field equipment.

Novelties.—Jno. L. McElroy, 109 W. Myrtle St., San Antonio, Tex.—To contract for the mfrs. of a novelty or small device.

Oil Burners.—W. E. Toler, Pawnee, Okla.—Data and prices of oil burners for cook and heating stoves, also names and addresses mfrs.

Paper (Confectioners Trade).—See Candy Making Equipment.

Paper Machinery.—L. K. Moss, 728 Peyton St., Birmingham, Ala.—Mchy. for mfrs. of paper.

Paring Machines.—Tas-Te Fruit & Canning Co., Paul R. Fredericks, Prest., Treas., and Gen. Mgr., 191 Market St., Paterson, N. J.—Machines for paring apples. (See Construction News—Canning and Packing plants.)

Paving Equipment.—Froebe-Gravelle-Hamblin Co., Muskogee, Okla.—Prices asphalt paving plant, concrete paving mixer, concrete paving equipment and road oiling equipment.

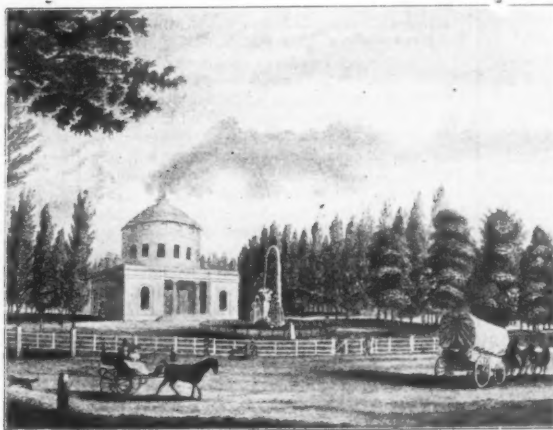
Paving Materials.—Froebe-Gravelle-Hamblin Co., Muskogee, Okla.—Prices on asphalt and road oil.

Paving.—City, J. N. Landers, Purchasing Agt. Atlanta, Ga.—Bids until Nov. 7 to pave Abilene, Belmont, DeSota, Central and other avenues and streets. (See Construction News—Road and Street Construction.)

Paving.—City, S. P. Witt, Mayor, Lenoir, Tenn.—Bids until Nov. 10 to pave, grade, curb and gutter Improvement Dists. No. 7 and 8; 24,461.83 sq. yds. paving; 14,334 lin. ft. curbing; etc.; plans, etc., on file.

Philadelphia is most bountifully provided with fresh water, which is showered and jerked about, and turned on, and poured off, everywhere. The waterworks, which are on a height near the city, are no less ornamental than useful, being tastefully laid out as a public garden, and kept in the best and neatest order. The river is dammed at this point, and forced by its own power into certain high tanks or reservoirs, whence the whole city, to the top stories of the houses, is supplied at a very trifling expense.

—*"American Notes" by Charles Dickens.*



Old Pumping Station, Philadelphia

In 1842 Charles Dickens wrote the above description of the Philadelphia Water Works. At that time cast iron pipe, in Philadelphia, had been delivering water faithfully, for 25 years. Nor was its usefulness nearly over. In 1915 the pipe illustrated was removed, though still in good condition after almost a century of service, to make way for a line of larger capacity.

*Write to the Publicity Department,
Burlington, for booklet "98 years
of Excellent Service."*



Section of 1817 line

United States Cast Iron Pipe and Foundry Co.

General Office: Burlington, New Jersey

Pitters (Peach and Cherry).—Tas-Te Fruit & Canning Co., Paul R. Fredericks, Prest., Treas. and Gen. Mgr., 191 Market St., Paterson, N. J.—Peach and cherry pitters. (See Construction News—Canning and Packing Plants.)

Playground Equipment, etc.—Simeon Haywood, Chrmn. City Playground Committee, Trenton, N. C.—Playground and athletic equipment.

Plumbing Fixtures.—Treasury Dept., Supvg. Archt's Office, Washington, D. C.—Bids until Nov. 17 to furnish plumbing fixtures for U.S.P.H.S. hospital, Perryville, Md., plans on file.

Plumbing and Lighting Fixtures, etc.—Treasury Dept., Supvg. Archt's Office, Washington, D. C.—Bids until Nov. 15 to furnish plumbing fixtures, radiators, and lighting fixtures, etc. for U. S. P. H. S. Hospital, Fort Mackenzie, Sheridan, Wyoming; plans on file.

Porch.—M. A. Long Co., 1523 Munsey Bldg., Baltimore, Md.—Sub-bids and estimates until Oct. 28 on construction of porch at Crownville State Hospital, Crownville, Md.

Pulverizers (Sugar).—C. M. Bass, Elk City, Okla.—Names and addresses mfrs. of sugar pulverizers or machines to make powdered sugar.

Rails.—Box R-1, care of Manufacturers Record, Baltimore, Md.—12 mi. of 60, 8 mi. of 50 and 50 mi. of 56 lb. relaying rails: Southern delivery.

Railroad Equipment.—Central Missouri Coal & Mining Co., 314 Central Trust Bldg., Jefferson City, Mo.—Data and prices on construction 1 1/4 mi. standard and narrow gauge railroad. (See Construction News—Coal Mines and Coke Ovens.)

Ready-Cut Lumber.—Ideal Hosiery Mills, Maryville, Tenn.—Names and addresses Southern lumber mills who furnish ready cut material for mill village houses.

Refrigerating Machinery.—Imperial Ice Cream Co., W. M. B. Sine, Director, Clarksburg, W. Va.—Bids until Nov. 10 for refrigerating machinery. (See Construction News—Miscellaneous Factories.)

Refrigerating Apparatus, etc.—Treasury Dept., Supvg. Archt's Office, Washington, D. C.—Bids until Nov. 16 to install mechanical equipment for various buildings; refrigerating apparatus and kitchen equipment for Ambulant patients mess, etc.; refrigerating apparatus for General mess, laundry equipment, new boilers outside service, etc., at U. S. Public Health Service Hospital No. 50, Whipple Barracks, Prescott, Arizona; plans on file or with Custodian at Whipple Barracks.

Road Building Materials.—Smith Bros., 504 Guaranty Bank Bldg., Alexandria, La.—Cement, sand and stone. (See Construction News—Road and Street Construction.)

Road Building Equipment.—Smith Bros., 504 Guaranty Bank Bldg., Alexandria, La.—2 combination drag line or steam shovel, prefer steam shovel drag line or unloader; also excavating and conveying mch.; rock crushers and culverts. (See Construction News, Road and Street Construction.)

Road Construction.—Matagorda County J. F. Perry, County Judge, Bay City, Tex.—Bids until Nov. 8 to construct 7.23 mi. Highway No. 12-A; F. A. Project 175; plans from J. C. Carrington, County Engr.

Road Construction.—Orangeburg County Highway Comsn., L. K. Sturkie, Clk., Orangeburg, S. C.—Bids until Nov. 8 to construct 7.731 mi. Columbia-Savannah highway between Calhoun county line and city limits of Orangeburg; 10,023 cu. yds. sand-clay surfacing; etc.; plans, etc., on file. (See Construction News—Road and Street Construction.)

Road Construction.—Highway Dept. Board State Engrs., 332 Maison Blanch Annex, New Orleans, La.—Bids until Nov. 7 to surface with gravel 10.53 mi. Natchitoches-Mansfield highway, Robeline to DeSoto Parish line; 8.81 mi. Natchitoches-Colfax highway, Grand Ecure to Saline Bayou; information on file. (See Construction News—Road and Street Construction.)

Road Construction.—Denton County, Ed. I. Key, County Judge, Denton, Tex.—Bids until Nov. 3 to surface 10.03 mi. Dallas-Denton road; 94,190 sq. yds.; construct 8.55 mi. Dallas-Sherman road; T. E. Huffman, County Engr. (See Construction News—Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 8 to construct 6.65 mi. State highway in Wake County between end of Federal Aid Project No. 24 at Garner and Johnston county line on Route No. 10; State Project 482; 62,400 sq. yds. plain or reinforced concrete pavement or 62,400 sq. yds. combination concrete base and header course with 58,500 sq. yds. Topeka, sheet or rock asphalt or warrenite surfacing; plans from Dist. Engr., Durham, N. C.

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 8 to construct 2.30 mi. State highway in Durham and Orange counties west of Durham-Orange county line on Route No. 10; 24,350 sq. yds. plain or reinforced concrete pavement or 24,350 sq. yds. combination concrete base and header course with 23,000 sq. yds. Topeka, sheet or rock asphalt or warrenite surfacing; State Project 410; plans from Dist. Engr., Durham, N. C. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 8 to construct 5.12 mi. State highway in Granville County between Oxford and Bullock on Route No. 75; State Project 427; 48,060 sq. yds. plain or reinforced concrete pavement; or 48,060 sq. yds. combination concrete base and header course with 45,060 sq. yds. Topeka, sheet or rock asphalt or warrenite surfacing; plans from Dist. Engr., Durham. (See Construction News—Road and Street Construction.)

Road Construction.—Dist. Engr., Bureau Public Roads, U. S. Dept. Agriculture, Washington, D. C.—Bids until Nov. 7 to construct 6.7 mi. James River National Forest road project in Amherst and Rockbridge counties; Vernon M. Pierce, Dist. Engr., 506 Willard Bldg., Washington. (See Construction News—Road and Street Construction.)

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids until Nov. 4 to construct 1.461 mi. State road from Weingarten southwestwardly; St. Genevieve County, State Aid Project 20,100; cost \$18,335.82; M. S. Murray, Div. Engr., Sikeston, Mo. (See Construction News—Road and Street Construction.)

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids until Nov. 3 to construct 17.09 mi. State road from Lamar eastward and westward; Barton County, State Aid Project 20,104; H. P. Moberly, Div. Engr., 505 Woodruff Bldg., Springfield, Mo.

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids to construct 7.210 mi. State road from Cuba westward; cost \$20,930.77; Crawford County, State Aid Project 20,105; bids opened Nov. 2; H. D. Griffith, Div. Engr., DeSoto, Mo. (See Construction News—Road and Street Construction.)

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids until Nov. 4 to

construct 1.371 mi. State road from Waynesville eastward; Pulaski County, State Aid Project 20,107; cost \$16,760.74; H. D. Griffith, Div. Engr., DeSoto, Mo. (See Construction News—Road and Street Construction.)

School (Public) Equipment.—Perkins Construction Co., 110 1/2 W. Coffee St., Greenville, S. C.—Prices on public school equipment.

Seating.—School Board, Smithfield, N. C.—Desks and opera chairs for 15-room and auditorium school.

Sewers.—City, Felix Z. Wilson, Mayor, Nashville, Tenn.—Bids opened to construct sewers in Alley 280, between Smilet and Bienville Sts.

Sewers.—City, J. H. Schoepf, Pur. Agt., Asheville, N. C.—Bids opened to construct sewers in Deaver St.; plans, etc., from B. M. Lee, City Engr. (See Construction News—Sewer Construction.)

Sewers.—City, Felix Z. Wilson, Mayor, Nashville, Tenn.—Bids opened to construct sewers in Alley 718, 8th, Nelson and Siegler Sts.; etc.

Sewers.—City, A. M. Lopez, Clk., West Palm Beach, Fla.—Bids until Nov. 22 to install sewer system; vitrified clay sewer pipe; Carr & McFadden, Engrs. (See Construction News—Sewer Construction.)

Sewer Construction.—District Commrs., Room 509 Dist. Bldg., Washington, D. C.—Bids until Nov. 22 to construct 2,000 ft. sewer; information, etc., from Ch. Clk. Engineering Dept., Room 427 District Bldg.

Sewing Machines.—P. C. Rodwell, 139 Broughton St., Orangeburg, S. C.—Names and addresses mfrs. of machines for mfrs. of mens shirts.

Sprinkler Equipment (Automatic).—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Nov. 18 to install automatic sprinkler equipments in Hotel Trivoli, Administration Building, and electrical storehouse, Canal Zone, Blank forms and information (Circular 1460) on application to offices of; Panama Canal; New York; New Orleans, Fort Mason, San Francisco; U. S. Engr. offices throughout country.

Stairway (Iron).—Billy West, 1300 Main St., Lynchburg, Va.—Iron stairway. (See Buildings Proposed—Miscellaneous.)

Stairway (Metal).—Newland Brick Co., Newland, N. C.—Names and addresses mfrs. of or dealers in outside metal stairway.

Stave Mill.—Tas-Te Fruit & Canning Co., Paul R. Fredericks, Prest., Treas. and Gen. Mgr., 191 Market St., Paterson, N. J.—Stave mill. (See Construction News—Canning and Packing Plants.)

Steel Bars.—Dist. Commrs., Room 509 Dist. Bldg., Washington, D. C.—Bids until Nov. 17 to furnish 75,000 lbs. deformed steel bars, use in sewer division; for information apply to Room 20, Dist. Bldg.

Sterilizing Equipment, etc.—Treasury Dept., Supvg. Archt's Office, Washington, D. C.—Bids until Nov. 15 to furnish sterilizing and kitchen equipment for U. S. P. H. S. Hospital, Fort Mackenzie, Sheridan, Wyoming; plans on file.

Stump Pullers.—G. M. Randall, Box 641, Daytona, Fla.—Data and prices on stump pullers. (See Construction News—Land Development.)

Tanks.—Tas-Te Fruit & Packing, Paul R. Fredericks, Prest., Treas. and Gen. Mgr., 191 Market St., Paterson, N. J.—Steel, iron or aluminum tanks; 3/4 in. thick x 3 ft. wide, 7-ft. long, 1-ft. deep. (See Construction News—Canning and Packing Plants.)

Tiles (Roofing).—Peacock-Rice Co., Beverly Peacock, Mgr., Coconut Grove, Fla.—Names and addresses mfrs. of roofing tiles

Barrett Specification Roofs

Bonded for 20 and 10 Years



Barrett Specification 20-year Bonded Roofs on Union Station Sheds of Norfolk & Western and Atlantic Coast Line R. R. Arch.: Chief Engineer of Norfolk & Western Railroad. Roofer: David Simpson & Son, Richmond, Va.

For All Flat-Roofed Buildings

BARRETT Specification Roofs are perfectly suited to every type of permanent flat-roofed structure. On the Umbrella Sheds of the Norfolk & Western Railway at Union Station, Petersburg, Va., they will prove just as economical as they have already proved through long years of service on thousands of office buildings and factories, also roundhouses and passenger stations all over the country.

Because of their moderate first cost, unequalled durability, freedom from upkeep and high degree of fire resistance, the use of Barrett Specification Roofs has become standard practice with the architects, construction engineers and building owners of America.

The Barrett Specification provides for the use of roofing materials of the highest quality, applied in the proper quantities and by the most approved methods.

The Barrett Inspection Service insures strict compliance with the Specification.

The Barrett Surety-Bond Guarantee absolutely protects the owner from upkeep expense over a long period of years.

The Barrett Specification Type "AA" Bonded Roof represents the most permanent roof covering it is possible to construct, and while we bond it for 20 years only, we can name many roofs of this type that have been in service over 40 years and are still in good condition.

Where the character of the building does not justify a roof of such extreme length of service, we recommend the Barrett Specification type "A" Roof, bonded for 10 years. Both roofs are built of the same high grade materials, the only difference being in the amount used.

Before specifying or closing contract for a Barrett Specification Bonded Roof, be sure to read carefully all the stipulations in the specification.

Full details regarding these Bonded Roofs and copies of The Barrett Specification, sent free on request.

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Denver



Jacksonville

THE BARRETT COMPANY, Limited: Montreal Toronto Winnipeg Vancouver St. John, N. B. Halifax, N. S.

similar to Ludowici tile; prefer mfrs. of south or east so as to eliminate excessive freight.

Tractors.—G. M. Randall, Box 641, Daytona, Fla.—Data and prices on tractors. (See Construction News—Land Development.)

Transmission Equipment.—Moncure Mfg. Co., Moncure, N. C.—Apparatus to carry current from developing plant to city. (See Construction News—Electric Plants.)

Wheels (Wooden).—Valley Mfg. Co., Chattanooga, Tenn.—Wooden wheels, artillery type with roller bearings, 8 and 10-in. diam. suitable for boy coaster wagon.

Syrup Machinery.—W. J. Walker, Savannah, Ga.—Names and addresses mfrs. syrup machinery for cane syrup. (See Construction News—Miscellaneous Factories.)

Water-Works.—Graham Heights Land Co., McCoy Moretz, Prest., 10 E. 4th St., Charlotte, N. C.—Bids until Jan. 1, 1922, for 10,000 ft. 4 and 6-in. water main; C. G. Hubble, Engr.

Wiring System, etc.—Treasury Dept., Supv. Archt's Office, Washington, D. C.—Bids until Nov. 9 for conduit and wiring system at U. S. Post Office Philadelphia, Pa.; plans on file or with Custodian at Philadelphia.

Woodworking Machines.—John G. Duncan Co., Jackson and Central Sts., Knoxville, Tenn.—Names and addresses mfrs. of machines to make splits for split bottom chairs of white oak or other wood suitable for this work.

Financial News

New Financial Corporations.

Fla., Lakeland—Lakeland Building & Loan Assn., capital \$250,000, organized with C. I. Stacy, Prest.; E. L. Mack, Secy.-Treas.

Md., Baltimore—Atlantic Finance & Guaranty Co., 825 Equitable Bldg., capital \$100,000, inctpd. by Wm. H. Price, Jr., Matthew Gault.

Mo., Glasgow—Tri-County Trust Co., capital \$75,000 inctpd., by John Naberhaus, Forest Green, Mo.; L. F. Becker, Glasgow.

N. C., Biltmore—Biltmore-Oteen Bank, capital \$50,000, organized with J. G. Stikeleather, Prest.; W. A. McGreathy, Cashr.

S. C., Charleston—Industrial Loan & Investment Corp., capital \$25,000 inctpd., with D. S. Vone, Prest.-Treas.; James B. Heyward, Secy.

Tex., Dallas—East Dallas Investment Co., capital \$10,000 inctpd., by E. M. Doughty, L. H. Porter.

Tex., Houston—Houston Building & Loan Assn., capital \$5,000,000 inctpd., with Wm. S. Patton, Prest.; W. A. McElroy, Secy.-Treas. and Gen. Mgr.

Tex., Junction—Kimble Cattle Co., capital \$50,000 inctpd., by Adam Murr, T. S. Jones.

W. Va., Oak Hill National Bank, may organize with \$50,000.

New Securities.

Ala., Bessemer—Sewer—City, B. C. Jones, Mayor, plans voting on \$40,000 sewer bonds in Fifth Ward.

Ala., Gadsden—Street—City sold \$143,500 of 6 per cent \$500 denomination 10-yr. street

bonds, dated Nov. 1, 1921 to, Lasley Bros., Chattanooga, Tenn., at par. (Lately noted inviting bids.)

Ark., Little Rock—Drainage—Southeast Arkansas Levee Dist. sold \$400,000 of 6 per cent bonds to Wm. R. Compton Co., St. Louis, Mo.

Ark., Magnolia—Road—Magnolia-McNeill Road Improvement Dist., W. R. Cross, Secy., will sell \$85,000 of 6 per cent \$500 to \$1000 denomination 17-yr. road bonds at private sale. (Lately noted.)

Fla., Chipley—Road and Bridge—Washington County Bond Trustees Special Road and Bridge Dist. No. 1 will receive bids until Nov. 21 on \$100,000 of 6 per cent semi-annual 30-yr. road and bridge bonds, dated July 1, 1921; C. B. Dunn, Chrmn.

Fla., Green Cove Springs—Street, Sewer, Water and Electric—City voted \$150,000 street, sewer, water and electric bonds. Address The Mayor. (Previously noted contemplating.)

Fla., Green Cove Springs—Road—Clay County sold road bonds to Bryson Live Stock Co., Jacksonville, Fla., at 95.

Fla., Lake City—Road—Columbia County sold \$20,000 road bonds to W. W. Philip at 95; these are part of \$100,000 issue offered on Oct. 11; J. L. Markham, Clk County Commrs. (Lately noted inviting bids.)

Fla., Manatee—Sewer and Water—City, Chas. J. Majory, Clk., voted \$6,000 water and sewer bonds; 6 per cent \$500 denomination 20-yr. (Lately noted to vote.)

Fla., Miami—City Comsn., C. B. Selden, Director of Finance will receive bids until Nov. 15 on \$52,000 of 6 per cent improvement bonds, dated Aug. 1, 1921.

Fla., Pensacola—Paving, Water and Sewer—City will receive bids until Nov. 7 on \$125,000 improvement bonds as follows: \$50,000 paving; \$25,000 water and \$70,000 sewer; F. D. Sanders, Mayor. (Supersedes recent item.)

Fla., Starke—Road—Bradford County voted \$50,000 road bonds. Address County Commrs. (Lately noted to vote.)

Fla., St. Augustine—School—St. Johns County will issue and sell \$130,000 of 6 per cent semi-annual warrants; D. D. Corbett, Secy. Board Public Instruction.

Fla., Titusville—Road and Bridge—Brevard County will receive bids until Nov. 12 on \$300,000 of 6 per cent \$1000 denomination bonds, dated Oct. 1, 1920; N. T. Froscher, Clk. Circuit Court.

Fla., West Palm Beach—Street, Sidewalk, Sewer and Park—City Comsn. plans issuing street, sidewalk, sewer and park improvement bonds.

Fla., West Palm Beach—Road—Palm Beach County will vote on road bonds of Lake Worth Drainage Dist. Address County Commrs.

Fla., West Palm Beach—Waterways—Palm Beach County votes Oct. 27 on \$100,000 waterway bonds. Address County Commrs.

Ga., Atlanta—Refunding—W. J. Speer, State Treas., will receive bids until Nov. 10 on \$174,000 of 5, 5½, 5½ or 5¾ yr. refunding bonds.

Ga., Atlanta—Street—J. R. Seawright, Chrmn. Finance Committee will receive bids until Nov. 4 on \$83,500 of 6 per cent semi-annual street bonds.

Ky., Carrollton—Water and Light—City will vote Nov. 8 on \$22,000 water and light bonds; J. E. Gullion, Mayor.

Ky., Catlettsburg—School—Catlettsburg School Dist. sold \$40,000 of 6 per cent \$500 denomination school bonds, dated July 1,

1921 to Breed, Elliott & Harrison, Cincinnati, O. (Lately noted voting.)

Ky., Falmouth—Water and Electric Light—City will vote Nov. 8 on \$15,000 of 6 per cent \$500 denomination electric light and water-works improvement bonds. Address The Mayor.

La., Columbia—Electric Light and Water-works—City sold \$30,000 electric light and water-works bonds. Address The Mayor.

La., Opelousa—Road—St. Landry Parish Road Dist. No. 2 sold \$150,000 of 5 per cent road bonds to Marine Bank & Trust Co., New Orleans, La.

La., Vidalia—Road—B. C. Brown, Prest. Concordia Parish Police Jury will receive bids until Nov. 14 on \$50,000 of 6 per cent \$1000 denomination road bonds.

Md., Baltimore—Water—City sold \$1,000,000 of 5 per cent water bonds to Equitable Trust Co., Calvert and Fayette Sts.

Md., Denton—School—Caroline County Commrs. sold \$40,000 of 6 per cent semi-annual \$1000 denomination school bonds, dated Oct. 1, 1921; W. C. Todd, Prest. (Lately noted inviting bids.)

Mo., Jackson—School—Jackson School Dist. will vote Nov. 8 on \$15,000 school bonds. Address Board of Education.

Mo., Independence—Sewer and Light—City sold \$150,000 of 6 per cent sewer bonds to National City Co. and Commerce Trust Co., and \$35,000 of 6 per cent light bonds to Stern Bros. & Co., Kansas City, Mo.

Mo., Sedalia—Courthouse—Pettis County Court will vote Nov. 15 on \$400,000 courthouse bonds.

Mo., West Plains—Road—Howell County sold \$200,000 of 5 per cent road bonds to Stern Bros. & Co., Kansas City, Mo. (Lately noted inviting bids.)

N. C., Aurora—Street—City sold \$25,000 of 6 per cent street bonds at par and interest; W. H. Hooker, Mayor. (Previously noted inviting bids.)

N. C., Beaufort—School—New Port Consolidated School Dist. will receive bids until Nov. 10 on \$65,000 of 6 per cent semi-annual school bonds; M. L. Wright, County Supt.

N. C., Elm City—School—Board of Trustees will receive bids until Nov. 16 on \$75,000 of 6 per cent \$1000 denomination school bonds; B. A. Harrelson, Secy.

N. C., Fayetteville—School—J. S. Schenck, Chrmn. Board Trustees, will receive bids until Nov. 7 on \$250,000 of 6 per cent semi-annual 39 2/3 yr. school bonds.

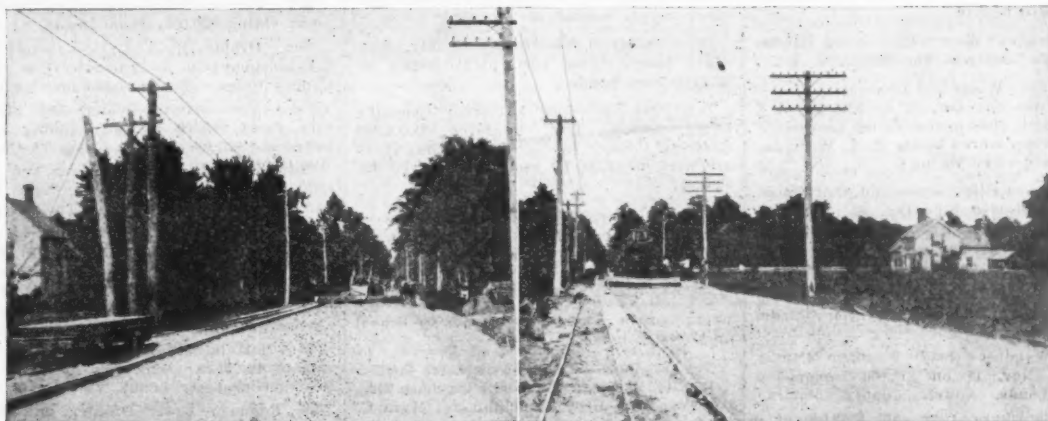
N. C., Kinston—Electric—City sold \$300,000 of 6 per cent semi-annual \$1000 denomination electric bonds to New York bond brokers at par and interest; W. C. Coleman, Clk. (Lately noted inviting bids.)

N. C., Lenoir—Sewer—City will vote Nov. 1 on \$150,000 sewer bonds. Address The Mayor. (Supersedes recent item.)

N. C., Lexington—Street, Water and Electric—City sold \$200,000 street, \$50,000 water, light and sewer extension bonds to Stacy & Baum, Toledo, O.; 6 per cent \$1000 denomination, dated Oct. 1, 1921. Lately noted inviting bids.)

N. C., Swannanoa—School—Buncombe County Commrs. will vote Dec. 14 on \$50,000 school bonds of Swannanoa School Dist.; B. A. Patton, Chrmn., Asheville, N. C.

N. C., Wilson—School—School Committee will receive bids until Nov. 7 on \$135,000 school bonds as follows: \$60,000 Black Creek, \$35,000 Spring Hill, 25,000 Taylor's and \$25,000 Saratoga Townships; 6 per cent \$1000 denomination, dated Aug. 1, 1921; Charles L. Coon, Supt. County Schools. (Lately noted voting.)



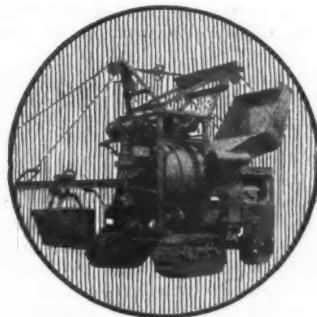
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LAKEWOOD METHODS AND MACHINES

N. C., Winston-Salem—School, Playground and Hospital—City voted \$1,000,000 school, \$100,000 park and playground and \$50,000 hospital bonds; Robert G. Hanes, Mayor. (Lately noted to vote.)

Okl., Braggs—Water—City voted \$10,000 water bonds. Address The Mayor.

Okl., Enid—Water and Convention Hall—City receives bids Oct. 31 on \$275,000 of 6 per cent 25-yr. \$1000 denomination convention hall and water-works bonds R. T. Williams, Clk. (Lately noted voting.)

Okl., Holdenville—Sewer and Convention Hall—City received bids Oct. 25 on \$45,000 bonds including \$30,000 sewer and \$15,000 convention and armory hall. Address The Mayor. (Lately noted voting.)

Okl., Sulphur—Paving—City sold \$98,000 paving bonds to Oklahoma city firm. Address The Mayor.

Okl., Wagoner—Road—Wagoner County will vote Nov. 17 on \$75,000 Blue mound township bonds. Address County Commrs.

S. C., Batesburg—City sold \$130,000 of 6 per cent bonds to J. B. McCrary Co., Atlanta, Ga., at par.

S. C., Charleston—Street—City will vote Nov. 8 on street bonds. Address The Mayor.

S. C., Mauldin—School—Poplar School Dist. voted \$12,000 school bonds. Address Board of Education.

S. C., McCormick — Road — McCormick County sold \$30,000 road bonds to Bank of McCormick.

S. C., Ravenels—School—School Dist. No. 17 voted \$75,000 school bonds. Address Board of Education.

S. C., Ridgeland—Road—Jasper County Highway Comsn. sold \$100,000 road bonds to Bank of Ridgeland at par.

Tenn., Jamestown—Road—Fentress County sold \$150,000 of 6 per cent \$1000 denomination road bonds, dated July 1, 1921 to B. Tigrett & Co., Jackson, Tenn.

Tenn., Knoxville — Incinerator — City Commrs. plan issuing \$75,000 of 5 per cent \$1000 denomination 30-yr. incinerator bonds; John L. Greer, Recorder.

Tenn., Knoxville—Street—City sold \$160,000 of 6 per cent 1-5 yr. serial street bonds to City National Bank, at 100.07.

Tenn., Knoxville—Harris Trust & Savings Bank, Chicago, Ill., has been awarded \$500,000 of \$5000, \$10,000 and \$25,000 discount notes.

Tenn., Lenoir City—Street—S. H. Monger, City Recorder, will receive bids until Nov. 10 on \$55,000 and \$27,500 of 6 per cent street improvement bonds.

Tenn., Manchester—J. C. Crocker, Chrmn. Coffee County Court will receive bids until Nov. 7 on \$50,000 of 6 per cent \$500 and \$1000 denomination bonds.

Tenn., Memphis—Shelby County will vote Nov. 8 on 250,000 Tri-State fair bonds. Address County Commrs.

Tenn., Sevierville—Street—City will vote on about \$400,000 street bonds. Address The Mayor.

Tex., Athens—School—School Board sold \$125,000 school bonds at par.

Tex., Brownsville — Street — City voted \$100,000 street bonds; A. B. Cole, Mayor. (Previously noted to vote.)

Tex., Center—Water and Sewer—Attorney General's Dept., Austin, Tex., approved \$80,000 City water and \$30,000 sewer bonds.

Tex., Comanche—School—Comanche Independent School Dist. sold \$110,000 of 6 per cent \$1000 denomination 40-yr. school bonds to First State Bank. (Lately noted.)

Tex., Corpus Christi—Irrigation and Water Supply—Nueces County Water Improvement Dist. No. 3, A. A. Thompson, Secy Board Directors will vote Nov. 19 on irrigation and water supply bonds.

Tex., Dallas—Levee—Dallas County, Bois d'Arc Island Levee Dist. plans voting on \$225,000 levee bonds.

Tex., Eastland—Road—Attorney General's Dept., Austin, Tex., approved \$1,000,000 Eastland County Special road bonds; these are part of \$4,500,000 road bonds voted by county.

Tex., Edinburg — Electric and Water — Attorney General's Dept., Austin, Tex., approved \$30,000 City electric light and \$30,000 water bonds.

Tex., El Paso—School—Attorney General's Dept., Austin, Tex. approved \$40,000 School Dist. No. 2 bonds.

Tex., El Paso—School—Winchester Cooley, V.P. City National Bank, will purchase \$40,000 Concordia Dist. School bonds; Myra C. Winkler, County School Supt.

Tex., Fort Davis—Road—Jeff Davis County sold \$96,000 of 5½ per cent \$1000 denomination road bonds to a construction company at El Paso, Tex., at par and interest. (Lately noted inviting bids.)

Tex., Fort Worth—School—Attorney General's Dept., Austin, Tex., approved \$125,000 school bonds of Arlington Heights.

Tex., Graham—Sewer and Water—Attorney General's Dept., Austin, Tex., approved \$40,000 City sewer and \$40,000 water bonds.

Tex., Laredo—Paving—City voted \$150,000 paving bonds; Leopoldo Villegan, Mayor. (Supersedes recent item.)

Tex., Marshall—Road—Harrison County sold \$251,000 road bonds to Bolger, Mosser & Williams, Chicago, at 85 and accrued interest. (Supersedes recent item.)

Tex., Midland—Road—Midland County sold \$117,000 of 5½ per cent serial road bonds, dated Mar. 1, 1921 to Breg, Garrett & Co., Dallas, Tex.

Tex., Mission—Street, Water, Sewer and City Hall—City sold \$100,000 bonds including \$25,000 street, \$40,000 water, \$15,000 sewer and \$20,000 city hall to L. E. Artliff, Austin, Tex., these bonds were voted Jan. 26.

Tex., Montague—Road—Montague County voted on \$260,000 road bonds. Address County Commrs.

Tex., Mt. Calm—School—Attorney General's Dept., Austin, Tex., approved \$8,000 of 5 per cent Mt Calm Independent School Dist. bonds.

Tex., Odessa—Road—Ector County sold \$97,000 of 5½ per cent 30-yr. road bonds to Womack Construction Co., Houston, Tex., at par and interest. (Lately noted inviting bids.)

Tex., Rockport—Breakwater—City voted \$50,000 breakwater bonds. Address The Mayor.

Tex., San Elizario—Schools—Town voted \$12,000 school bonds. Address The Mayor.

Tex., Sherman—Road—Grayson County plans selling \$190,000 road construction bonds. Address County Commrs.

Tex., Stanton—Road—Martin County sold \$60,000 of 5½ per cent 20-yr. serial road bonds to Womack Construction Co., Houston, Tex. (Lately noted inviting bids.)

Tex., Tahoka—Water—Attorney General's Dept., Austin, Tex. approved \$14,000 City waterworks and \$18,000 electric light bonds.

Tex., Tarrant—School—Van Zandt Independent School Dist. sold \$100,000 school bonds to Breg, Garrett & Co., Dallas, Tex.

Tex., Teague—School—Board of Education plans voting \$50,000 school bonds.

Tex., Uvalde—Road—Uvalde County sold \$180,000 Road Dist. No. 2 bonds; D. H. Jones, County Judge. (Lately noted inviting bids.)

Tex., Van Alstyne—Water and Sewer—City voted \$45,000 bonds including \$30,000 sewer and \$15,000 water. Address The Mayor.

Tex., Wortham—Water, Sewer and Electric—City will vote Nov. 7 on water, sewer and electric bonds. Address The Mayor.

Va., Chatham—School—Pittsylvania county Supvrs. receives bids Nov. 1 on \$60,000 of 6 per cent semi-annual 20-yr. \$1000 denomination school bonds of Dan River School Dist., dated Sept. 1, 1921; J. J. Whitehead, Chrmn.

Va., Norfolk—Waterfront—City, Chas. M. Ashburner, Mgr., will sell \$5,000,000 water-front property bonds.

Va., Roanoke—Sewer, Drainage and Market —City sold 4½ per cent semi-annual sewer and drainage bonds at \$86,825 and 4½ per cent semi-annual market bonds at \$43,632.50 to J. B. Walker & Co., New York. (Lately noted inviting bids.)

Va., South Norfolk (P. O. Norfolk)—Street and Sewer—City, F. L. Rowland, Mayor, will vote Nov. 8 on \$300,000 of 5½ per cent \$100 denomination 30-yr. street and sewer bonds. (Lately noted.)

W. Va., Paden City—Water-works—City, S. I. Furbee, Mayor, receives bids Oct. 29 on \$27,500 of 6 per cent \$500 denomination water bonds, dated Sept. 1, 1921.

Financial Notes.

Bank of Zolfo, Zolfo Springs, Fla., will increase capital from \$30,000 to \$50,000 and change name to Hardee County Trust Co.

Farmers & Mechanics Bank of Durham, N. C., will increase capital from \$50,000 to \$100,000.

Sulphur Springs Loan & Building Assn., Sulphur Springs, Tex., will increase capital from \$1,500,000 to \$2,000,000.

Railways.

Fla., West Palm Beach.—Engineers reported surveying for a branch of the Florida East Coast Railway from West Palm Beach to the bend in the West Palm Beach Canal, 16 mi. Jules M. Burguières, of the Southern States Land & Timber Co., West Palm Beach, is interested.

Tex., Dallas—Missouri, Kansas & Texas Railway let contract to the Coon Construction Co., of Kansas City, it is reported, to build second track on main line from Dallas to Granger, Tex., 163 mi. Edwards-Oran Transfer Co. of Waco has sub-contract for grade from West to Waco, 15 mi.

Tex., Dallas—Texas Construction Co., general contractor for the Dallas and Terrell line of the Texas Interurban Railway Co., has let sub-contract for grading and trestles to the Allhands & Davis Construction Co. of Kansas City, for about \$120,000. Richard Meriwether in charge of construction for the railway company.

Tex., Orange—Lucas & Lucas, of Sacu, Tex., reported to have begun work on contract for extensive improvements to right of way and roadbed of Texas & New Orleans Railroad (Southern Pacific System), from Echo westward.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Manager Appointed

S. P. Rees, formerly with the Pittsburgh Filter & Engineering Co. of Pittsburgh, Pa., has been made manager of the municipal filtration department of the International Filter Co., First National Bank Building, Chicago, Ill.

Railroad Culvert Built Without Halting Traffic

A culvert on the Pennsylvania Railroad at Maurer, N. J., was built during the past summer when traffic was heaviest and without even a slow down order. Two 20-foot cylinders of $\frac{3}{4}$ -inch boiler plate, 6 feet 6 inches in diameter, were jacked through the embankment beneath the main line tracks at an average progress of $3\frac{1}{2}$ feet per nine-hour day. "Doughboy" jacks, as manufactured by the McKiernan-Terry Drill Co. being used exclusively, and after the work was done they showed not the least distortion or damage, although 12 by 12 inch jacking timbers were repeatedly crushed. After the excavation of the shell was completed 48 by 52 $\frac{1}{2}$ inch Massey pipe was installed with grout filler between pipe and shell. The work was done for the Barber Asphalt Paving Co. by Arnold-More Inc., of Newark, N. J., under the personal supervision of F. M. Arnold, who with J. G. Forsman, engineer for the railroad, developed the idea. Other engineers on the work were F. G. Morse for the Barber Asphalt Paving Co. and H. D. Gunther, superintendent for Arnold-More, Inc.

Structural Iron and Steel Manufacture Added By Old Established Macon Plant

J. S. Schofield's Sons Co., Macon, Georgia, manufacturers of engines, boilers and machinery, besides mill and machinists supplies, have added to their line structural iron and steel such as beams, girders, trusses, castings, etc., and are now prepared to supply these materials in quantity. This old and well known plant was established in 1855 and incorporated in 1900 and its works are situated immediately adjacent to trunk line transportation facilities.

Branch Plant to Be Established

The McHenry-Millhouse Manufacturing Company, of South Bend, Indiana, who make roofing and building paper, will establish a branch plant in Baltimore, Md., according to announcement by the Industrial Bureau of the Baltimore Board of Trade, George C. Smith, Director. The company has bought the property of the Electrolytic Zinc Co., 1200 South 16th St., Canton, Baltimore, and it will be enlarged and remodeled, the work to be completed by March 1 next. The products of the company include a complete line of roll roofings, shingles, felts, building papers and roof coating paints, being one of the largest industries in this line. From the Baltimore plant the entire southeastern section of the country will be served and the main export business of the company will also be carried on in Baltimore. At the beginning 100 men will be employed. The local manager is J. L. Kittinger.

New President Elected

H. C. Blake, for several years secretary and general manager of the Foos Gas Engine Company, Springfield, Ohio, has been elected president of that corporation to fill the vacancy caused by the death of Scipio E. Baker, and M. E. Baker has been elected secretary and treasurer. This well known and long established company manufactures gas and oil engines.

Two Electric Furnaces Ordered

The Ford Motor Co. have placed an order with the Electric Furnace Construction Co., 908 Chestnut St., Philadelphia, Pa., for two large Greaves-Etchells electric furnaces for their new plant at the Rouge Works, Dearborn, Michigan. The furnaces will be basic lined and they are designed to operate either for melting up accumulated scrap or for treating hot metal. This is the third order placed by the Ford Company for this type of furnace, the first unit having been installed at the Highland Park Works in 1917.

Sand Blast Machine for Small Plants

A new sand blast barrel just on the market offers, it is announced, a practical, efficient machine at a first cost low enough to be within the means of the smallest plants. The barrel drum, which is mounted within a sheet metal, dust tight cabinet on a structural steel frame, is 24 inches in diameter and 16 inches long; it is of perforated sheet metal. The driving mechanism is all outside. A feed box and hose convey the sand to a nozzle and dust tight doors close the cabinet and the opening for the nozzle. The space occupied by this machine is 2 feet 7 inches by 3 feet 6 inches and it is 5 feet 6 inches high. It is manufactured by the Pangborn Corporation, Hagerstown, Md.



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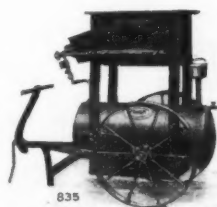
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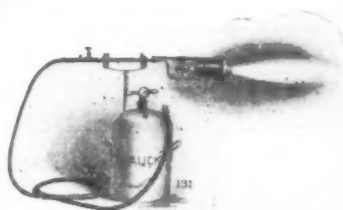


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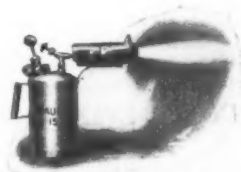


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Factors that influence prices

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Large Portland-Cement Output in September.

The movement of portland cement continued on a large scale throughout September, states the Geological Survey, more than 11,300,000 barrels having been shipped from mills. Shipments of portland cement during the third quarter of the year were approximately 33,970,000 barrels, establishing a record for this quarter. For the nine months ending September 30, 1921, the shipments amounted to 74,045,000 barrels, which exceeds the former record volume moved in the corresponding period of 1920.

Favorable operating conditions are indicated by the large September production of 10,027,000 barrels of finished cement, which established a record for that month. Production for the third quarter likewise established a record, and for the nine months ending September 30 the production was about 99.8 per cent of the record quantity made during that period last year.

Stocks of cement at the mills were drawn upon to supply demand during September, as is customary in the season of active demand. At the end of the month stocks of finished cement at mills were approximately 6,953,000 bar-

rels, compared with 8,280,000 barrels at the beginning of the month. This is about 135,000 barrels below the average for the month of September, 1917-1921.

Building Operations in Kentucky Boosted by Big Gain in Coal Output.

Knoxville, Tenn., October 22—[Special]—Bituminous coal figures show that eastern Kentucky production increased 181 per cent from January 1 to August 1 as compared with the corresponding period last year. During August the Louisville & Nashville hauled 31,890 cars from eastern Kentucky of which 14,428 came from the Harlan field.

As a result of the big coal developments in the state millions of dollars are being expended in improvements of all kinds. Spinning, weaving, hosiery and underwear mills are increasing the number of hours of work, and some plants are working at night in order to speed up production.

Local contractors engaged in road construction are securing contracts for work involving hundreds of thousands of dollars. Modern mining towns are being erected and others improved. Many residences are going up.



PROPOSALS

BOND ISSUES
BUILDINGS
PAVING
GOOD ROADS

Bids close November 17, 1921.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., October 24, 1921. Sealed proposals will be opened in this office at 3 p. m., Nov. 17, 1921, for furnishing Plumbing Fixtures for the U. S. P. H. S. Hospital, Perryville, Maryland, in accordance with specifications, copies of which may be obtained at this office, in the discretion of the Supervising Architect, Jas. A. Wetmore, Acting Supervising Architect.

Bids close November 14, 1921.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., October 24, 1921. Sealed proposals will be opened in this office at 3 p. m., November 14, 1921, for furnishing and installing lighting fixtures in the U. S. Treasury Building at Washington, D. C., in accordance with drawings and specifications, copies of which may be had at this office in the discretion of the Supervising Architect, Jas. A. Wetmore, Acting Supervising Architect.

Bids close November 16, 1921.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., October 26, 1921. Sealed proposals will be opened in this office at 3 p. m., November 16, 1921, for furnishing and installing lighting fixtures in the U. S. Public Health Service Hospital at Norfolk Va., in accordance with the drawings and specifications, copies of which may be had at this office in the discretion of the Supervising Architect, Jas. A. Wetmore, Acting Supervising Architect.

Bids close November 10, 1921.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., October 13, 1921.—SEALED PROPOSALS will be opened in this Office at 3 p. m., November 10, 1921, for construction of a kitchen and mess hall building for the United States Public Health Service Hospital at Fort Logan H. Roots, North Little Rock, Arkansas. Drawings and specifications may be obtained from the Superintendent of Construction at Fort Logan H. Roots, or at this office in the discretion of the Supervising Architect, Jas. A. Wetmore, Acting Supervising Architect.

Bids close November 28, 1921.

UNITED STATES ENGINEER OFFICE, Baltimore, Md. Sealed proposals will be received here until 1 P. M., November 28, 1921, and then opened, for dredging Baltimore Harbor, Maryland. Further information on application.

\$23,000 6% Bonds

Gloster, Miss.

Notice is hereby given in accordance with an order passed at the regular October, 1921, meeting of the Board of Mayor and Aldermen of the Town of Gloster, Mississippi, that at the regular meeting of said Board to be held at the Town Hall of the Town of Gloster, Mississippi on the first Tuesday of December, 1921, the Board will offer for sale the Bonds of said Town, in the sum of \$23,000.00 to be in denominations of \$500.00 each, maturing not later than 20 years from said date, at a rate of interest not to exceed 6% per annum.

This 19th day of October, 1921.

J. L. LONGMIRE,
Clerk.

Bids close Nov. 21, 1921.

\$100,000.00 6% Road and Bridge Bonds.

Chipley, Fla.

Notice is hereby given that sealed bids will be received by the Board of Bond Trustees of Special Road and Bridge District No. One of Washington County, Florida, until 12 o'clock noon, Monday, November 21st, 1921, for the sale of One Hundred Thousand Dollars (\$100,000.00) bonds of said District, bearing six per cent (6%) interest, payable semi-annually, on the first day of January and July, and said bonds being dated July 1st, 1921, and maturing thirty years after date, and being of the denomination of Five Hundred Dollars (\$500.00) each, principal and interest being payable at the National City Bank, New York, N. Y.

The bonds are authorized by Chapter 8861, Laws of Florida, 1921, for the purpose of building a system of roads, culverts and bridges in said District, and for paying over to the Town of Chipley in said District Twenty Thousand Dollars (\$20,000.00) of the proceeds of said bonds for improving and constructing the roads and streets of said Town.

Each bid must be accompanied by a certified check payable to the Chairman of said Board of Bond Trustees in the sum of One Thousand Dollars (\$1,000.00) as a guarantee of good faith.

The Board of Bond Trustees reserves the right to reject any and all bids. Bids to be sent to C. B. Dunn, Chairman, Chipley, Florida.

Board of Bond Trustees,
Special Road and Bridge District
No. One of Washington County, Florida.
By C. B. DUNN,
Chairman.

Bids close November 10, 1921.

\$20,000.00 6% School Bonds.

Ft. Worth, Tex.

Bids will be received until November 10th, 1921 for Forest Hill School District bond issue of \$20,000.00, 40 years, with 20 year option, 6% interest. Rights reserved to reject any or all bids. For further information, Address Wm. C. Meador, 910 Dan Waggoner Bldg., Fort Worth, Texas.

Bids close November 16, 1921.

Arts Building, Power House, etc. RICHARD J. REYNOLDS HIGH SCHOOL, WINSTON-SALEM, NORTH CAROLINA.

Sealed proposals, addressed to James G. Hanes, Mayor, will be received by the City of Winston-Salem, North Carolina, for the construction of the Academic Arts Building, Power House and other work, in connection with the above High School.

Proposals will be opened in the Office of the Mayor at 3:00 P. M. on Wednesday, November 16th.

Plans and Specifications may be obtained from the Office of CHARLES BARTON KEEN, Architect, 1218 Chestnut Street, Philadelphia, Pennsylvania, upon receipt of a deposit of THIRTY DOLLARS (\$30.00), of which TWENTY DOLLARS (\$20.00) will be refunded on return of the plans and specifications, the balance being retained to cover the cost of blueprinting plans and specification.

Proposals must be accompanied by a certified check, to the amount of TWENTY FIVE THOUSAND DOLLARS (\$25,000.00) which will be forfeited to the City of Winston-Salem, if successful bidder fails to sign contract and furnish bond within fifteen (15) days after notice of award of Contract. Checks of unsuccessful bidders will be returned after bids are opened.

Separate proposals will be received for the installation of Boilers, Heating and Ventilating Systems. Proposals will be opened on the aforesaid date and place.

These Plans and Specifications may be obtained from the Office of WILEY AND WILSON, Consulting Engineers, LYNCHBURG, VIRGINIA, upon receipt of check for TWENTY FIVE DOLLARS (\$25.00), which will be refunded when drawings are returned to Engineers.

Proposals for this work must be accompanied by a certified check for TWENTY FIVE HUNDRED DOLLARS (\$25,000.00), which will be forfeited to the City of Winston-Salem, or returned to the bidder as set forth above.

The City of Winston-Salem reserves the right to reject any or all proposals submitted.

Bids close November 16, 1921.

Reinforced Concrete Arch Bridges.

Little Rock, Ark.
Sealed proposals will be received up to two thirty P. M. of Wednesday, November 16, 1921, by the Commissioners of the Broadway-Main Street Bridge District, at their office in the Moore & Turner Building, in the City of Little Rock, Arkansas, for the construction of the superstructures of two reinforced concrete arch bridges across the Arkansas River. All of the substructure work, except that for the approaches, has been completed for the two bridges. One of these bridges will be located at Main Street, and the other at Broadway Street, in the City of Little Rock, Arkansas. All bids will be opened in public at place and hour named.

Bids may be submitted either on a lump sum basis or upon a cost plus fee basis. All bids are to be placed in envelopes, sealed and then marked thereon, "Proposals for Broadway-Main Street Bridges."

The Commissioners reserve the right to reject any or all bids. The Contractor will be paid in cash upon Engineer's estimate, approved by the Board, as the work progresses.

Each bid is to be accompanied by a certified check made payable to the Broadway-Main Street Bridge District on some responsible bank for a sum equal to two and one-half per cent of the amount of the bid or bids.

For further information, instructions to bidders, plans, specifications and forms for proposals, address:

Broadway-Main Street Bridge
District of Little Rock,
Pulaski County, Arkansas.

Showing the Financial Condition of Washington County, Florida, Which Offers For Sale \$31,000.00 Time Warrants, For Sale No- vember 7th, 1921.

Vernon, Fla.

This is to certify that the financial condition of Washington County, Florida, is as follows:

Five Thousand Dollars interest bearing Time Warrants, due December 6th, 1921, with money on Time Deposit in the Chipley State Bank, Chipley, Florida, to retire this block, together with interest.

Five Thousand Dollars due December 6th, 1922, with the taxes already assessed and levied to retire these warrants; therefore, Washington County has only Five Thousand Dollars indebtedness, and this amount has already been provided for.

A Conservative estimate of the value of Washington County taxable property is Six and One half Million Dollars, the assessed valuation is Two Million One Hundred Sixty Thousand Dollars.

Given under my hand and official seal this the 17th day of October A. D. 1921.

A. G. McQUAGGE,
Clerk Circuit Court and
County Auditor.

Bids close November 7, 1921.

\$31,000 6% Time Warrants.

NOTICE OF CHANGE OF DATE

Vernon, Fla.

On Monday November 7th, 1921, at 1 o'clock P. M. at Vernon, Florida, the Board of County Commissioners, of Washington County, Florida, will sell, Thirty-One Thousand Dollars Time Warrants, bearing interest at the rate of Six per cent, interest payable annually; Warrants issued serially in denominations of One Thousand Dollars each, and payable at the National City Bank, New York, in from Two to Eleven years.

Sealed bids will be received at the office of the Clerk of the Circuit Court, up to 12 o'clock noon, October 3rd, and bidders will be required to accompany their bid with Cashier's check in the sum of One Thousand Dollars, as a guarantee of good faith.

For further particulars write to A. G. McQuagge, Clerk of the Circuit Court, Vernon, Florida.

THE BOARD OF COUNTY COMMISSIONERS, WASHINGTON COUNTY, FLORIDA.

BY A. D. CAMPBELL,
Chairman said Board.

Attest:

A. G. McQuagge,
Clerk.

Bids close November 8, 1921.

\$240,000 Road Bonds.

Bushnell, Fla.

Notice is hereby given, that W. N. Potter, Clerk of the Board of County Commissioners of Sumter County, Florida, will receive bids up to 12 o'clock noon of Tuesday, November 8th, 1921, at his office in Bushnell, Florida, for \$240,000.00 worth of the \$750,000.00 County Road Bonds of Sumter County, Florida said Bonds being dated January 1st, 1920 and maturing as follows; twenty of said Bonds January 1st, 1948 and twenty of said Bonds on the First day of January of each year thereafter, up to and including, January 1st 1959. Said Bonds being in the denomination of \$1,000.00 each, interest payable semi-annually and drawing interest at the rate of 6%, interest payable on the First day of January and July of each year.

Bidder to accompany his bid with certified check for 2% of the amount bid as evidence of good faith.

The County Commissioners reserve the right to reject any and all bids.

W. N. POTTER,

Clerk Board of County Commissioners,
Sumter County, Florida.

Bids close November 8, 1921.

\$400,000 6% Road Bonds.

Key West, Fla.

The Board of County Commissioners of Monroe County, Florida, will receive bids for the purchase of \$400,000 of Monroe County road bonds. Bonds to be in the denomination of \$1000 each, and to bear interest at the rate of 6 per centum per annum, interest coupons payable semi-annually. The principal of the bonds payable 30 years from date of bonds. The bond issue has been authorized by an election of the qualified electors of Monroe County, and validated by decree of the Circuit Court.

The County has less than \$200,000 indebtedness. Assessed valuation of taxable property of Monroe County is nearly \$5,000,000.

Any and all bids may be rejected if the County Commissioners deem it for the best interest of the County. Address all communications to D. Z. Filer, Clerk, Key West, Fla. All bids must be submitted not later than 8.00 P. M. November 8th, 1921.

The County Commissioners require all bidders for the said bonds to accompany said bid with certified check for the sum of \$1000, payable to the Board of County Commissioners of Monroe County, Florida. The said check will be returned in case the bid is rejected. If accepted the amount will be applied on account of the payment of the amount bid for the bonds. Said check to be forfeited to the county in case the bid is accepted and the bidder fails to comply therewith.

Under the law no bid can be accepted for less than 95% of the par value of the bonds. Key West, Fla. October 7th, 1921.

D. Z. FILER,

Clerk Board of County Commissioners,
Monroe County, Florida.

By E. W. RUSSELL,
Deputy Clerk.

Bids close November 9, 1921.

Bridges

OFFICE OF THE VIRGINIA STATE HIGHWAY COMMISSION, RICHMOND, VA.
116 So. Third St., Richmond, Va.
October 25, 1921.

Bids will be received at the office of the Virginia State Highway Commission, 116 South Third street, Richmond, Virginia, until 12 o'clock noon, November 9th, 1921, for the construction of the following bridges:

Virginia Project No. 122, a steel and concrete bridge over Dry Creek on State Road No. 10 between Jonesville and Rose Hill in Lee County.

Virginia Projects Numbers 133B, a steel and concrete bridge over Horse Pasture Creek and 133C, a steel and concrete bridge over Mayo River, both of these bridges being on State Road No. 12, between Five Forks and Patrick County Line in Henry County.

Engineers will be at the following places to show contractors over the different Projects as follows:

At Jonesville at 10:00 A.M. November 3rd for Project 122.

At Martinsville at 10:00 A.M. November 5th for Projects Nos. 133B and 133C.

Plans and specifications are on file at office of the Va. State Highway Commission, 116 So. Third St., Richmond, Va. and at office of the following Resident Engineers:

For Project 122, J. D. Keeler, Bristol.
For Projects 133B and 133C, R. D. Bryant, Roanoke.

Plans for these Projects can be secured from W. F. Hobart, 104 North 8th St., Richmond, as follows, No. 122 at a cost of \$1.00 and 133B and 133C at \$1.68.

A certified check to the amount of 5% of the total bid made payable to the State Highway Commissioner must accompany each bid.

The State Highway Commissioner reserves the right to reject any or all bids.

G. P. COLEMAN,

State Highway Commissioner.

Bids close November 23, 1921.

Notice

GENERAL CONTRACTORS.
HEATING CONTRACTORS.
PLUMBING CONTRACTORS.
ELECTRICAL CONTRACTORS.

Sealed proposals will be received by the Board of Trustees of the Wilson North Carolina Graded School District, Wilson, N. C., at the office of C. L. Coon, Superintendent of Schools at Wilson, N. C., until 12 o'clock Noon, November 23, 1921, and then opened for the erection and completion of a High School building in the City of Wilson, N. C.

Drawings, and specifications may be seen at the office of CHAS. C. WILSON, ARCHITECT, 105 Davis Building, Wilson, N. C., 208 First National Bank Building, Gastonia, N. C., 804-7 Palmetto Building, Columbia, S. C., and also in the offices of the Builders Exchange in Atlanta, Ga. and Columbia, S. C., and in Charlotte, North Carolina, Chamber of Commerce, and may be obtained upon application to the office of the Architect, 804-7 Palmetto Building, Columbia, S. C. upon a deposit of \$25.00 as a guarantee that they will be returned in good condition and without expense not later than the date set for the opening of the bids, and that a bona fide bid is filed. Deposit will be returned when above conditions have been complied with, otherwise, it will be retained by the architect. Additional sets will be furnished upon request at a charge of \$15.00.

Sub-contractors or material men who desire to submit bids to general contractors may secure such portions of plans and specifications as they may desire from the Columbia office, at current prices for blue prints.

SEPARATE CONTRACTS

The following separate contracts will be made:

- No. 1. General Contract covering erection and completion of building.
2. For the installation and completion of the Heating and Ventilating Plant.
3. For the installation and completion of all Plumbing.
4. Installation and completion of all Electrical work of every description.
5. To furnish and install all Equipment of every nature.
6. All outside walks and steps from street to terraces.

The right is reserved to reject any or all bids.

T. F. PETTUS,

Chairman Building Committee.

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

FOR SALE—239 acres proven gold and platinum dirt, five to fifty dollars per ton, placer and quartz mining. Price \$30,000. O. M. Alexander, Anniston, Alabama.

MEXICO

100 to 1,000 acres land located in the western part of the State of Tepic, Pacific Coast, Mexico, on the San Pedro River. In the heart of the oil formation on the Pacific Coast. The coming oil fields of Mexico, also good location for combination sugar plantations and stock Ranches. Titles to the lands are good, a translated copy of the transcript to title will be furnished. E. George & Co., Inc., 407 Broadway, New York.

OIL AND GAS LANDS

KENTUCKY OIL PROPERTY.

now producing, capable of expansion to 150 barrels of oil per day, settled production, for sale account sickness of owner. The property is on Pipe Line, has gas and water for complete development, four wells finished, fifth started, contains 66 acres in Magoffin County, Ky. Will net 50% annually. Price \$65,000.00. Details, and shown by request to undersigned. P.O. Box 274, Lexington, Ky.

SILICA

WE HAVE, in South Texas, practically unlimited supply of fine grade Silica which Government Chemist advises is best grade in United States. Wonderful base for manufacture of metal polishes tooth paste, nail polish, mechanics soap, etc. Will sell as whole or on contract. G. A. Gandre, 321 Union Station, Houston, Texas.

STONE QUARRY

FOR SALE OR LEASE—One of the oldest Quarries in Texas, Unlimited amount of Fine Building Stone. Has always been a Money Maker. Owner has to retire on account of ill health. Will not require large capital. Address, G. T. Allen, Leander, Texas.

COAL

AVOID COAL shortage and high prices later. Buy coal from us now and save money. Can furnish smokeless, splint, gas, by-product for your plant, home or retail yard. Write or wire for prices. MOORE & HETZEL, Charleston, W. Va.

COAL LANDS AND MINES

FOR SALE—2500 acres unimproved coal land in tracts, \$35 per acre; has several seams; top drift; adjacent railroad, mines, gas and oil. Write Cavanagh, McAlester, Okla.

ANTHRACITE COAL LAND.

20,000 acres high grade anthracite, fee simple, 3 seams—3 to 16 feet. 35,000,000 feet timber. 12,000 acres fine orchard land. R. R. 2 miles. Nearest anthracite coal to tidewater. Price \$1,000,000. Expert reports and service. Yeatman, Pill & Smith, 2109 First Ave., Birmingham, Ala.

COAL AND TIMBER LAND

FOR SALE—Fifty thousand acres coal and timber land; produce 2500 ft hardwood timber and 10,000 tons bituminous coal (15,388 B. T. U.) per acre. Veins five feet thick; drift, self drain mining; fine farming land. Three miles from R.R. and ten miles from city 60,000 people; \$7.50 per acre in fee, warranty deed. W. R. Power, City Bank Building, Mobile, Alabama.

TIMBER LAND

CHEAP TIMBER LANDS.

We have timber lands, well located. At prices cheaper than pre-war prices. One especially attractive tract for Mine-pros or keg staves. 575 acres all in growing timber. **GOOD INVESTMENT PROPOSITIONS.** BATTE & BROWDER, Jarratt, Va.

RATES AND CONDITIONS

Rate 30 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, post-office or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, oil or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 28c. per line; 300 lines, 26c. per line; 500 lines or more 25c. per line.

TIMBER LAND

14,938 ACRES in fee on Apalachicola River in Florida. Thirty-five million feet Cypress Oak, Ash and Gum. Price \$7.00 per acre. Terms to responsible parties.

Thirty Million feet high grade Cypress, Poplar, Oak, Ash, Gum and Pine on Flint River in Georgia unlimited amount can be added direct from owners at a low price. Best mill location in State. Price \$75,000.00 on terms. Reason for selling have ten years cut for our mills other than these tracts.

REYNOLDS BROS. LUMBER COMPANY
ALBANY, GA.

HARDWOOD TIMBER LANDS offered for 60 days at about half price. Urgent necessity compels this sacrifice. I own 14,500 acres in two boundaries and am compelled to sell this property before Jan. 1st, 1922. Address No. 5905, care Manufacturers Record, Baltimore, Md.

FARM AND TIMBER LANDS

HUNTING PRESERVE FOR SALE

Produced \$20,000 Worth of Furs in 1919. Will sell in fee about 15,000 acres containing a large amount of high grade hardwood saw timber; also vast wealth suitable for pulp and paper making. Large variety of soils, much extremely fertile. Will make one of the best stock ranches in the South. Price an inducement. Address P. O. Box 1128, Wilmington, N. C.

TIMBER

TIMBER FOR SALE.

From twenty to one hundred and fifty million feet, in separate tracts, of pine and of hardwood. Deal direct with owner. J. W. Barnes, Savannah, Ga.

TIMBER OPERATIONS

FOR SALE—Lumber milling proposition, complete equipment, now in operation, Eastern Carolina; 25,000,000 feet timber: plenty more available; big bargain; \$175,000, half cash, balance terms. Address No. 5700 care Manufacturers Record, Balto., Md.

FOR SALE GEORGIA SHORT LEAF PINE.

40 million feet exceptionally fine grade short leaf roofer timber three portable saw mills 30 thousand capacity planing mills and all necessary logging equipments good organization now running full capacity with over one million feet dry roofers on hand ready for immediate shipment. Located near two main line Railroads. 20 to 30 million feet more timber can be secured near by undoubtedly the best roofer proposition in Georgia. A very attractive price for quick sale or would sell one half interest to acceptable purchaser. P. O. Box 604 Macon, Ga.

SUBURBAN PROPERTY

FOR SALE

97 acres adjoining the City of Roanoke. Best lot sub-division; big money-maker; good terms act quick. Address No. 5876 care Manufacturers Record.

FARM FRUIT, AND TRUCK LANDS

FLORIDA

RARE INVESTMENT OPPORTUNITY—12,000 acres of fertile land in Southern Florida at less than half its wholesale value to close up trust agreement. Want to hear from land sales organization, investment syndicate or capitalist interest in safe and sure investments. Ben F. Kagay, Jr., First National Bank Bldg., Edinburg, Ill.

HOME, farm and grove. 40 acre farm with bearing grove, new first class 7-room bungalow, barn, etc.; best of soil; high healthy location. R. P. Evans, Dade City, Fla.

FLORIDA—Did you ever think about Florida strawberries—marketed in December to May—potatoes, cabbage, lettuce, celery, etc., and the high prices they bring? We also ship in trainload the best oranges and finest grapefruit in the world. Send for 1921 list of groves and farms. Tampa West Coast Realty Co., Inc., opposite Post-office, Tampa, Fla.

LEARN of the Vale of Paradise, where dreams come true. This wonder city is having a magic growth, and a million dollars in municipal improvements are authorized for this year. Every kind of business opening here. We have seventeen miles of protected water front, with gorgeously beautiful home sites. Wonderful homes. Wonderful velvety lawns. Wonderful flowers in semi-tropical profusion. Fishing supreme. Every day you can catch the big fellows until your back aches and your hands blister. Paradise for motor boats, with hundreds of miles of protected waterways with wonder spots to visit. Finest motoring roads in the South. Bathing in bay and gulf wonderful. Healthiest city in America, with no business for doctors. Greatest golf course in America under construction. Coolest place in America in Summer, delightful in Winter. You may own a beautiful home here, with a perpetual income, at practically no investment. Grasp the opportunity of a lifetime. Address THE MAYOR, Valparaiso, Fla.

MEXICO

MEXICO RANCH—429,000 acres at 40¢ per acre. Terms. Timber is worth several million dollars. C. E. McGinnis, P. O. Box 722, Fort Worth, Tex.

MISSOURI

FOR SALE—1200 acres Mississippi River bottom in Ste. Genevieve County, Missouri, the richest land under the sun. 300 acres under high state of cultivation, three good houses, well and cistern water. Price \$30 per acre. John Herter, Ste. Genevieve, Mo.

NORTH CAROLINA

Nice farms for sale by the owner. These farms from 35 to 1250 acres of the finest farming land in the country. Our crops are tobacco, cotton, corn, oats, wheat, clover and stock. Fine grazing for the stock, meadows face bay. I am retiring from active business, hence these farms must go. J. G. Layton, Dunn, N. C.

TENNESSEE

FOR SALE—One acre of land with good 5-room frame dwelling, good barn, fine well, fruit trees, this property is especially adapted for a physician, splendid location, the community is in need of one. Price \$2000.

FARMS of all sizes for sale, fine section of country, land level and productive, strawberry culture very profitable, from \$300.00 to \$500.00 per acre is realized, land sells from \$40.00 to \$200. per acre. F. C. Enders, Portland, Tenn.

FARM, FRUIT AND TRUCK LANDS

VIRGINIA

A MONEY MAKING FARM AT A BARGAIN
550 acres located 12 miles from Lynchburg, Virginia. The soil is fertile and productive; 400 acres under high state of cultivation and pasture; balance timber. Gently rolling and well watered. It can be worked to advantage with modern machinery. 500 bearing apple trees and variety orchard of other fruits. Good 11-room frame dwelling, supplied with running water and gas lights. Large cow barn; stable; 100-ton silo; garage; 3 good tenant houses and all other necessary outbuildings. Priced low at \$60.00 per acre. Oglesby Real Estate Agency, Lynchburg, Va.

BUSINESS OPPORTUNITIES

FOR SALE—An excellent going automobile business in Knoxville, Tenn.; agency for two well known, Nationally advertised cars, splendid repair business, large steam heated three story garage building with long lease available to buyer, 10,000 square feet of storage space on top floor, large work room in basement with pit and street entrance. Business is now running from \$2,500 to \$3,000 per month on repair work alone. Owner has going business in contracting lines and offers this entire business at a most attractive price. Terms can be arranged. Possibilities for expansion unlimited. Chas. L. Henck Co., Business Brokers and Industrial Promotion, Knoxville, Tennessee.

PATENT FOR SALE.

It has been proven by Government tests that the most effective means of combatting the boll weevil is by pulling stalk, root and all in the fall and burning, doing away with the winter harbor of weevils in the field. Above patent is an article that can be used by same labor that picks and chops the crop, that is women and children who can easily remove the stalks with this small article with handle similar to hoe handle. Inexpensive to manufacture and should be as common on cotton farm as hoes and plow shares.

Will sell patent outright or with cash payment and royalty. T. H. Monk, 225 N. W. First Court, Miami, Fla.

SILENT PARTNER with \$3,000 to \$5,000 to be used in financing Farm Light and Water Systems to farmers, also the sale of gas and oil filling station with auto supplies as a side line. Good rate of interest allowed. Address No. 5898 care Manufacturers Record, Balto., Md.

WANTED—10 MORE MEN.

With investment and services to complete our initial organization. We have a variety of positions open to those who can make investment. Wonderful opportunity to make permanent connection with live, progressive Rubber Organization. We have about twenty more carloads machinery now enroute to Salisbury and expect to get into production on Tires and Tubes at a very early date. The Paul Rubber Co., Salisbury, N. C.

HAVE a manufacturing proposition of great merit for which I wish to organize and sell territory. Would like to get into communication with a broker or live sales organization to organize and dispose of states. John E. Robbins, Greensburg, Ind.

MY ASSOCIATIONS with responsible New York Underwriters enables me to prepare your propositions in a manner which will demand their serious consideration. Attorney Alfred S. Perry, Fairfield, Conn.

ELECTRICAL BUSINESS requires additional capital to handle increasing amount of business. \$10,000 worth of 8% preferred stock to be sold. Proposition is sound and will stand thorough investigation. Details given to interested parties on request. Address Edmund G. Otto, treasurer, Hill, N. H.

FOR SALE—Lumber Milling Proposition, 5,000 acres in fee, complete equipment, now in operation. West Virginia. 15,000,000 feet of timber, 500,000 feet now on stick. This property will be sold at a bargain. Address Jao. C. Chidester, Westor, West Virginia.

BUSINESS OPPORTUNITIES

RIGHT PARTY with capital can acquire interest in large hardware and mill supply company in growing city. Must be experienced, progressive and with good executive ability, taking active part in the management as head of accounting or sales departments. Address No. 5909 care Manufacturers Record, Balto., Md.

MAINTAIN A NEW YORK ADDRESS

Effective—Convenient

Mail and messages promptly forwarded
Write us to day.

David C. Way, 42 Broadway, New York

BANK & LANDS—Controlling interest in going Natl bank, minor interest in 6 nearby banks, owners beautiful residence. Will include several fine farms. Address J. L. McKamey, Imboden, Lawrence Co., Ark.

Water works and electric plant to supply water and light to the suburb of a large city. Fine proposition. Address No. 5875 care Manufacturers Record.

I SPECIALIZE in industrial, warehouse and business sites at and adjacent to Washington, D. C.

M. B. HARLOW, Colorado Building, Alexandria, Va. Washington, D. C.

WANTED—A good-sized block of high-grade stock of exceptional earning possibilities to market among our large clientele. Money must be for expansion. Wiers & Co., 115 Broadway, New York Established 1894.

LUMBER AND BUILDING MATERIAL

LUMBER FOR SALE—We have 40 million feet very fine Georgia short leaf pine timber well equipped 30 thousand capacity saw mills and planing mills now running full capacity with well organized force. Over one million feet dry roofers on sticks ready for immediate shipment. Would consider forming connections with reliable firm to handle our entire output at a contract price or commission basis who can advance \$75,000.00 to be paid back as lumber is shipped. Loan secured by entire holdings worth over \$200,000.00. Can arrange personal interview any time. Address C. Ben. Smith, Wayside, Ga.

WHEN IN NEED of flooring, ceiling, siding, finish, roofers, lath, shingles and dimension; write Stephens Lumber Co., Jacksonville, Fla.; 50 E. 42d St., New York city or Hibernia Bank Bldg., New Orleans, La.

FOR SALE

1 carload
1"x5" and 1"x6", 3' 6"
and 3' 10"

LONG CLEAR

WESTERN PINE

ANDERSEN LUMBER CO.,
South Stillwater, Minn.

YELLOW PINE LUMBER

From smallest mouldings to heaviest structural timbers: framing, flooring, ceiling, siding, finish, roofers, lath. In straight or mixed carload shipments. Let us quote you on your next bill.

C. G. HULL LUMBER COMPANY,
Laurel, Mississippi

PILING

FOR SALE.

All or any part of five thousand Pine Piling, running from forty-five to seventy-five feet long, 6" tips and 12-2 to 14-2 butts, ready for immediate delivery by barge or tow from the James River, Virginia. Piles must be moved so price will be cheap. Butler Lumber Co., Inc., Richmond, Va.

TIES, HANDLES, BLANKS, ETC.

FOR SALE

30,000 hewn ties, axe and plow handle blanks doubletree and neckyokes and all kinds rims in hickory and oak.
B. H. TROXEL, Ravenden Springs, Ark.

PATENT ATTORNEYS

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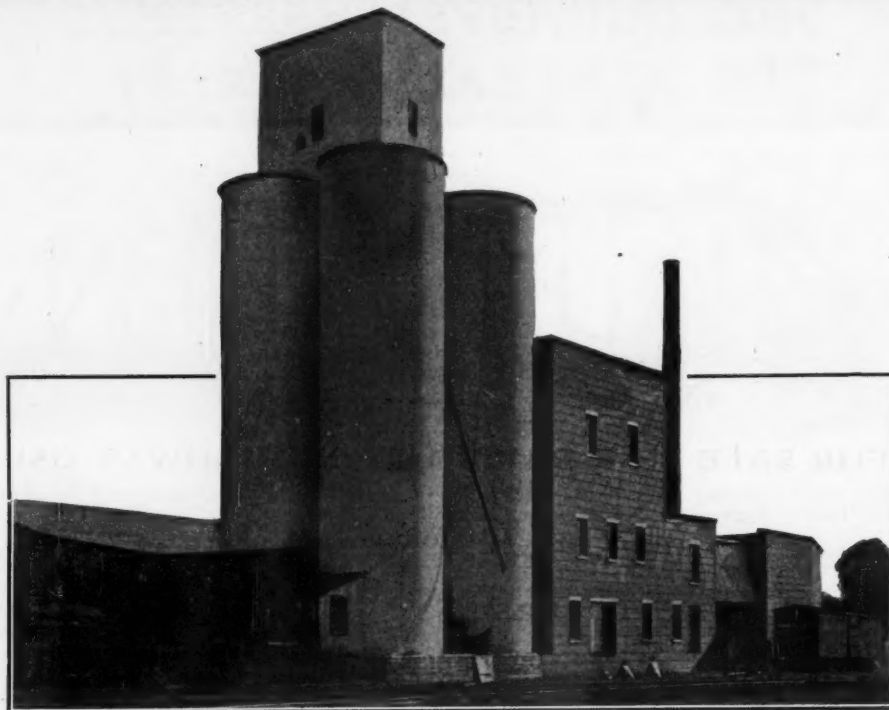
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All of the floors are four inches of concrete. The buildings are built on an embankment the height of the floor of a freight car. All of the plants are fed by the elevator which will unload a car every hour throwing the product right into the machines. All New. Plant built in 1919. Fine territory for products. No other mill within twenty-five miles. Refer to File 22602.

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(This boiler has only been used a few months
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These Boilers are being replaced with electric power.
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- 100 H.P. 750 RPM Northern compound wound. \$700.00
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- 1—350 H.P. B. & W. 150 lb
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Also

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One second hand Crude oil Marine En-
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HORIZONTAL TUBULAR BOILERS**

78" dia. 22' 0" long, complete with fronts, and fittings.

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10 KW 125 Volt D. C.

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NEW NEVER USED

Complete with switchboard. Cost \$1237. Will discount present day price 20%. Boxed on cars here. This is exactly as it left works. Has never been connected up. We have no use for it.

THE GORTON TRUST, CEMENT, OKLA.

STEPHEN HALL & CO., INC.

ELECTRICAL

Machinery & Equipment

See our advt. in last week's issue listing Engine Generator Sets.

NEW — MOTORS — USED

Let us figure on your requirements

HARRY W. MOTTER

Electrical Power Equipment

YORK

PENNSYLVANIA

There has been so much talk in the newspapers about high freight rates being prohibitive to business that we have been looking up freight rates and figuring the freight on motors from Chicago to various points. The figures are surprising.

Freight Rates to Leading Jobbing Centers

Dynamos and Motors—Oct. 1, 1921 Less than Carload Carload
Per 100 lbs. Per 100 lbs.

From Chicago to		
Baltimore, Md.	1.54½	.60
Philadelphia Pa.	1.55½	.61
Pittsburgh, Pa.	1.08½	.38
Charleston, W. Va.	1.08½	.38
Indianapolis, Ind.	.79	.27½
Detroit, Mich.	.88	.31
Cincinnati, Ohio	.89½	.31½
Cleveland, Ohio	.94½	.33
Memphis, Tenn.	1.42	.67
Knoxville, Tenn.	1.91½	.83½
Nashville, Tenn.	1.70½	.72
Birmingham, Ala.	2.17½	.94
Atlanta, Ga.	2.33½	1.03½
Savannah, Ga.	2.01	1.22
Jacksonville, Fla.	2.01	1.22
New Orleans, La.	1.93	.91
Richmond, Va.	1.54½	.60
Norfolk, Va.	1.54½	.60

Freight to Philadelphia, Baltimore, New York and New England Points.

1 H. P. D. C. or A. C. motors	2.25
5 H. P. D. C. motors	7.00
5 H. P. polyphase motors	4.50
10 H. P. D. C. motors	10.00
10 H. P. polyphase motors	7.00

Freight to jobbing centers south of the Ohio River.

1 H. P. D. C. or A. C. motors	2.50
5 H. P. D. C. motors	8.00
5 H. P. polyphase motors	5.00
10 H. P. D. C. motors	12.00
10 H. P. polyphase motors	7.00

Freights on larger sizes are proportionately low.

ELECTRIC MOTORS AND GENERATORS

We sell only SECOND HAND MACHINES but they are OVERHAULED like NEW.

Send for our MONTHLY BARGAIN SHEET showing complete stock and net prices that will astonish you—

GREGORY
ELECTRIC CO.
CHICAGO, ILLINOIS

WATER TUBE BOILERS

Two(2) 338 HP. Heine Water Tube Boilers, pressure allowed last inspection 200 lbs., single drum type, hand fired, complete with Bayer Soot Blowers, full front, full set of castings, and steam trimmings. Immediate shipment. An unusual opportunity to secure a pair of high grade boilers at an exceptionally low figure.

FRANK TOOMEY, INC.

127-131 N. 3rd St.

Philadelphia, Pa.

WILSON MACHINERY CO.

419 PINE ST., ST. LOUIS
USED ELECTRIC AND STEAM MACHINERY
A. C. UNITS 3 PHASE 60 CYCLE

K.W. Make	Volts	Rev.	Engine
50 Ridg.	2300	300	11x12 Ridgway
2-70 Westge.	2200	277	12x12 Ideal
2-100 W.E.	440	277	Westge. V. C. C.
100 E.M.	2300	300	B. S. Diesel Eng.
125 G.E.	2300	3600	Hor. St. Turbine.
150 Ft. W.	2200	220	14x22x19 Chuse 4-Va
137 Westge.	2300	3600	Parsons St. Turb.
250 G.E.	2300	200	18x24 Chuse 4-Va.
350 Westge.	Any	120	20x36 Nord. Cor.
500 G.E.	480	...	22x44x42 Al. Cor.
625 Westge	Any	...	Hor. Westge. St. Tur.
1250 G.E.	Any	1800	Hor. St. Turbine

D.C. UNITS—250 Volts

K.W. Make	Volts	Rev.	Engine
25 G.E.	125	300	9x10 Chuse
40 Triumph	250	300	9x12 Skinner
75 Triumph	250	100	16x36 Murray Cor.
100 Allis	250	...	15x14 Ames
200 W.E.	250	175	15x26x24 Ful. Cor.
300 Westge.	250	120	24x36 Murray Cor.
500 Westge.	250	120	Buckeye Cross-Comp.

BOILERS

2-66x18 125 lbs.	223	Heine	150 lbs. \$2100 ea.
1-72x18 135 lbs.	3-300	Heine	150 lbs. \$7 per HP.
2-72x20 140 lbs.	3-500	Erie	150 lbs. \$3 per HP.
2-64x18 125 lbs.	4-828	Stirling	300 lbs. \$3 per HP.

ENGINES

12x36 Allis. 14x36 St. Louis. 16x36 Allis.
16x42 F. S. 18x36 Bass. 20x42 St. L. 22x42 Fulton.

OIL ENGINES

100 KW 2300 V. dir. conn. to Busch Crude Oil Engine also 25, 50, 75, 100 and 150 HP Crude Oil Engines.

PUMPS**From Old Hickory Powder Plant**

- MOTOR DRIVE CENTRIFUGAL**
10 14 in. Worthington, Class B double suction, 8,600 G.P.M. at 152 feet head, at 1170 W.P.M. direct connected to 300 H.P. General Electric, 3 phase, 60 cycle, 2300 volt, 1700 R.P.M. motors.
4 14 in. Allis-Chalmers, Type S, 7500 G.P.M. at 30 feet head, at 1760 W.P.M. direct connected to 150 H.P. General Electric, 3 phase, 60 cycle, 2300 volt motors.
2 10 in. Allis-Chalmers, Type S, 3750 G.P.M. 130 feet head direct connected to 100 H.P. General Electric, 3 phase, 60 cycle, 2300 volt motors.

STEAM TURBINE DRIVEN CENTRIFUGAL
6 16 in. Allis-Chalmers, Type S, 8500 G.P.M. at 90 feet head, direct connected to Type L 300 H.P. 300 W.P.M. steam turbine.
6 14 in. Allis-Chalmers, Type S, 6500 G.P.M. at 150 feet head, 8100 G.P.M. at 90 feet head, direct connected to 300 H.P. 2000 R.P.M. steam turbine.

STEAM ACTUATED HYDRAULIC
6 14 and 20x7 1/2x18 Worthington Compound Duplex outside and pocket plunger, 400 R.P.M. at 300 lbs. pressure.
10 22 and 38x4 1/2x24 Worthington Tandem Compound Duplex, outside end pocket, 3600 lbs. pressure, 150 G.P.M. at 20 R.M.P.
2 20x12x16 Worthington Duplex Underwriters Fire Pumps, 1500 G.P.M. 180 lbs. pressure.
200 New and used boiler feed Worthington Pumps, 3x2x3, 4 1/2x3 1/2, 5 1/2x3 1/2x5, 6x4x6, 12x7x10.

Nashville Industrial Corporation
Jacksonville, Tenn.

2 ENGINE GENERATOR UNITS

150-K. W. 3-P 60-C. 2200-V.
Belted Exciters—Marble Sw. Bds.

PFANNMUELLER ENGINEERING COMPANY
First National Bank Bldg. Chicago

FOR SALE**400 K. W.—D. C.**

Westinghouse Generator, Direct connected to Wetherill heavy duty Rolling Mill type, slow speed, Double Eccentric.

CORLISS ENGINE

Condition equal to new.
Attractively priced.

POWER EQUIPMENT CO., Engrs.
1809 Buttonwood St., Philadelphia, Pa.

JOHN A. STEWART ELECTRIC CO.

S. W. Cor. Water and Vine Streets, Cincinnati, Ohio
1814 Continental Bank Bldg., Chicago, Ill. 2112 Central Street, Kansas City, Mo.

MOTORS

- 1-1400 hp. Westinghouse Type C. W. Slip-ring Rolling-mill type Motor, 3-ph., 60-cy., 2300 volts, 505 r.p.m., with magnetic control panel complete. This motor is brand new and in original crate.
1-1250 Kva. Westinghouse Synchronous, 6600 volts, 3-ph., 25-cy., 450 r.p.m., with starting motor.
1-750 hp. New Allis-Chalmers, 3-ph., 60-cy., 2200 volts, slip-ring, 505 r.p.m. with starter.
1-300 hp. New Allis-Chalmers, 3-ph., 25-cy., 440 volts, 485 r.p.m., slip-ring induction type, with drum control.
1-250 hp. New Allis-Chalmers, 3-ph., 60-cy., 650 volts, 600 r.p.m., squirrel cage, 40 degrees.
1-200 hp. General Electric, 3-ph., 60-cy., 2200 volts, 1760 r.p.m., slip-ring motor, with starter.
1-250 hp. Allis-Chalmers, brand new, 3-ph., 60-cy., 2200 volts, 514 r.p.m., slip-ring induction motor, with Westinghouse primary, Cutler-Hammer secondary starter.
1-250 hp. Allis-Chalmers, 3-ph., 60-cy., 2200 volts, 870 r.p.m., slip-ring induction motor, with Westinghouse primary and Cutler-Hammer secondary starter.
2-150 hp. Allis-Chalmers, 3-ph., 60-cy., 440 volts, 865 r.p.m., squirrel-cage motors, with starters.
250 hp. Burke, 2 or 3-ph., 60-cy., 2300 volts, 600 r.p.m., synchronous motor with direct-connected exciter and starting panel.
300 Motors, ranging from 1 1/2 to 75 hp., 3-ph., 60-cy., 550 volts, 40-degree motors, with controllers, at prices which will enable dealers with rebuilding-shop facilities to purchase, rebuild and sell at a profit. Detailed list mailed upon request.

TURBINES

- 3-500 kw. Gen. Elec. Vertical, 3-ph., 60-cy., 1800 r.p.m., 2400 volts, with 2000 sq. ft. surface condenser, with piping to headers. Beautiful condition. Immediate delivery.
2-400 kw. Westinghouse Bronze Bladed, 2 or 3-ph., 60-cy., 3300-2300-550-480 volts, 3600 r.p.m., condensing with 2500 sq. ft. surface condenser.

FREQUENCY CHANGERS

- 1-200 kw. O. E., 3-ph., 25-cy., 6000 volts, to 3-ph., 60-cy., 2400 volts, 750 r.p.m., four bearing; can be separated, making 2 motors.
1-400 kw. G. E., same as above, 375 r.p.m.
1-500 kw. G. E., same as above, 375 r.p.m.
2-1250 kva. G. E. 3-ph., 25-cy., 6600 volts, 375 r. p. m. motor type ATI to AC generator AQB, 5400/2700 volts, now 3-ph., reconnectable for 3-ph., 2300 volts, 62 1/2-cy., with direct connected exciter. Located near New York.
1-500 Kva. Westinghouse 3-ph., 25-cy., 6000 volts, 375 r.p.m. motor, to 2-ph., 62 1/2-cy., 2700 volts generator, reconnectable for 3-ph., no exciter. Located near New York.
1-400 Kva. G. E., 3-ph., 25-cy., 6000 volts, 375 r.p.m. motor to 2-ph., 62 1/2-cy., 2400 volts, generator (reconnectable 3-ph.), no exciter. Located near New York.

Engine Generator Sets

Write for Bulletin No. 2 describing some excellent units at most attractive prices and immediate delivery.

BRAND NEW MOTORS**Take Advantage of these Great Motor Bargains**

- 1000-1 1/2 H. P. single ph. 60 cy. 110 V. 1750 RPM. complete with cord, plug and pulley \$13.00 each.
1/2 H. P. Westinghouse single ph. 60 cy. 110/220 V. 1750 RPM. repulsion type \$40.00.
5 H. P. 3-ph. 60 cy. 220/440 V. 1800 RPM. complete with pulley and base \$70.00; 7 1/2 H. P. \$95.00; 10 H. P. \$120.00; 15 H. P. \$140.00.
These motors are known as the PHOENIX motors which we consider the highest grade motor on the market and are equal to such makes as General Electric, Westinghouse or any other motor on the market. It is guaranteed for one year from date of sale. They are packed in their original crates. Great bargains in other sizes. Let us quote you on your requirements.
Terms to all CASH WITH ORDER f. o. b. Chicago, subject to prior sale.
General Motor & Machinery Co.
601 W. Adams St. Chicago, Ill.

SPECIALY PRICED

- 2-50 H. P. Fairbanks Morse A. C. Squirrel Cage Induction Motors, 2 phase, 60 cycle, 220 volts, 900 R. P. M.
1-35 H. P. Fairbanks Morse A. C. Squirrel Cage Induction Motor, 2 phase, 60 cycle, 220 volts, 900 R. P. M.
2-50 H. P. General Electric D. C. Type D. L. C. Motors 220 volts, 450 R. P. M.

Machine Tools
Boilers, Engines
Air Compressors, Pumps.

DELTA EQUIPMENT CO.
148 N. Third St. Philadelphia, Pa.

CONDENSERS

- 2-Westinghouse No. 11 Le Blanc Low-level Jet Condensers, complete with motor-driven pumps, strainers and piping. Used one year and now in perfect condition. Good as new. Immediate delivery Cincinnati.

GENERATOR AND ENGINE

- 1-240 kw. Ft. Wayne, 3-ph., 60-cy., 2300 volts, 150 r.p.m., revolving field with belted exciter, direct connected to 13x27x24 Russell tandem compound 4-valve heavy-duty engine. Excellent condition. Immediate shipment Cincinnati.

MOTOR GENERATOR SETS**Immediate Delivery—Never Operated**

- 1-2140 kw. Allis-Chalmers 275-volt Direct current generator, direct connected to synchronous motor, 3-ph., 25-cy., 12,000 volts, with 300 kw. 275-volt (D.C.), 3-ph., 25-cy. Rotary Converter (used as exciter) and complete switchboard equipment.
1-1200 kw. Westinghouse 550 volt DC, 400 r.p.m. generator with 1700 hp. Westinghouse low 2-ph., 60-cy., 2200 volt, 400 r.p.m. synchronous motor (reconnectable 3-ph.). Located in Tennessee.
3-150 kw. Westinghouse 250 volt DC, 500 r.p.m. generator with 225 hp. Westinghouse 3-ph., 25-cy., 6600 volt, 500 r.p.m. synchronous motors. Located near New York.
1-100 kw. Westinghouse 125/250 volt DC, 1100 r.p.m. generator with 150 hp. Westinghouse 550 volt DC motor, 1100 r.p.m. with panels. Located Cincinnati.

BOILERS

- 2-450 hp. Sterling Water Tube, code built, 160-lb. working pressure, hand-fired grates, complete with all fittings.
6-500 hp. Aultman & Taylor B. & W. Boilers, with Green chain-grate stokers, 200-lb. pressure.
4-400 hp. Springfield Water-tube, good for 150-lb. pres., complete with Murphy underfeed stokers and all fitting, excellent condition, immediate delivery, low in price.
20-250 hp. Wickes, with stokers and all fittings; excellent condition. These boilers can go into Michigan or any other State.

ROTARY CONVERTER

- 1-500 kw. Westinghouse, 2300 volts A.C., 250 volts D.C., with transformers and switchboard panels; immediate delivery.
1-300 kw. Westinghouse, 60-cy., 3-ph., 11,000 volts A.C., 550 volts D.C., with transformers A.C. and D.C. panels. Other transformers available for different ratings.
1-400 kw. G. E., 250 volts D.C., 185 volts A.C., 375 r.p.m.; no transformers.
1-500 kw. G. E., same as above.
4-100 kw. G. E., 3-ph., 25-cy., 30 volts to 125 volts, DC 750 r.p.m. with 150 kva. transformers, 6000 volts to 83 volts—3 air cooled, one oil cooled. Located near New York.

New Corliss Engines.

27-18x36 Heavy Duty, Allis-Chalmers Corliss Engines, both right hand and left hand, 350 H. P. at 125 r. p. m. 11 ft. by 32 inches. Band wheel. Operated on 140-lb. steam pressure, 1 1/4 inch gauge back pressure, double eccentric.

THE NASHVILLE INDUSTRIAL CORP.
Old Hickory, Tennessee.

OIL AND GAS ENGINES**For Sale****Prompt Deliveries****New and Rebuilt Full Diesel Type****Oil Engines**

- 2-450 B. H. P. vert., 6 cyl., coupled to 3-ph. 60-cyc. A. C. generators.
1-450 B. H. P., vert., 6 cyl., belted.
2-225 B. H. P., vert., 3 cyl., bltd. or cpd.
1-225 B. H. P., vert., 3 cyl., coupled to 200 K. V. A. 3-ph. 60-cyc. 2300-v. generator.
1-170 B. H. P., vert., 3 cyl., belted.
1-120 B. H. P., vert., 3 cyl., coupled to 85 K. W. 3-phase. 60 cyc. 2300-v. generator.
1-120 B. H. P., vert., 3 cyl., coupled or belted.

Semi-Diesel Oil Engines

- 1-60 B. H. P., vert., 2 cyl., 2 cyc., belted.
1-40 B. H. P., vert., 2 cyl., 2 cyc., belted.
2-25 B. H. P., horiz., F-M. type "Y" belted.

Gas Engines

- 1-150 B. H. P., vert., 3 cyl., coupled to 100 K. W. 250-v. D. C. generator.
1-100 B. H. P., vert., 3 cyl., coupled to 62 1/2 K. W. 125-250-v. D. C. generator.

Above only partial list—write or wire us full details your requirements.

A. McMILLAN 628 Monadnock Block, Chicago
Specialist in Diesel Oil and Internal Combustion Engineering

FOR SALE OR RENT

Steam & Electric COMPRESSORS of all sizes.

Hoisting Engines
Derricks
Locomotive Cranes
Concrete Mixers
Orange Peel and Clam Shell Buckets
Motors, Generator, and Refrigerator Units
Steam and Electric Shovels.

COMPLETE STOCK READY FOR IMMEDIATE DELIVERY

ARCHER ARMSTRONG & CO.

4839 A Grand Central Terminal, N. Y. City
PHONE Vanderbilt 3487

SPECIAL

- 1-300 H.P. Westinghouse, CX, 3 Phase, 60 cycle, 220/440 V. 600 R.P.M. motor.
- 1-250 H.P. Westinghouse, C, 3 Phase, 60 cycle, 220/440 V. 600 R.P.M. motor.
- 1-250 H.P. Crocker Wheeler, 3 Phase, 60 cycle, 585 R.P.M. motor, 220/440 V.
- 1-300 H.P. Westinghouse, C, 3 Phase, 60 cycle, 600 R.P.M. motor, 220/440 V.
- 1-250 H.P. Westinghouse, C, 2 Phase, 60 cycle, 220/440 V. 580 R.P.M.
- 1-200 H.P. Westinghouse, C, 2 Phase, 60 cycle, 220/440 V. 580 R.P.M.
- 1-100 H.P. Crocker Wheeler, 3 Phase, 60 cycle, 220 V. 720 R.P.M.

Motors, Generators, Engines, Air
Compressors, Tanks, Boilers, Hoists, etc.

W. A. CARRELL & COMPANY

11 Second Ave.

Pittsburgh, Pa.

TURBINES

- 2-75 K. W. 250-volt D. C. General Electric Generator, direct connected to Curtis turbine, 150 lbs. working pressure, complete with oiling system and switchboard.

PLANERS

- 1-Patch straight side, 6' x 18" x 12' bed.
- 1-Patch straight or circular, 7' to 75' radius.

BOILERS

- 1-75 H. P. Economic Type Boiler, 100 lbs. pressure.
- 4-150 H. P. R. T., 125 lbs. pressure.
- 1-100 H. P. Economic Boiler, 100 lbs. pressure.

CRUSHER

- 1-Sturtevant Roll Jaw, size 6' x 15".

ROLLS

- 1-Sturtevant Balanced Roll, size 20" x 14".

LATHES

- 10-19x8 Le Blond, double back geared, quick change, belt driven.

HOISTING ENGINES

- 1-20 H. P. Mead-Morrison Bridge Hoist.
- 1-40 H. P. S. D., 220-volt, D. C. Lidgerwood Builders' Hoist.
- 1-8½x10 S. S. D. Lidgerwood, with boiler.
- 2-7½x10 D. C. D. National, with boiler.
- 2-7½x10 D. C. D. Mundy, with boiler.

AIR COMPRESSORS

- 1-350-ft. Air, Bury, steam.
- 1-1000-ft. Air, Sullivan.
- 1-60-ft. Air, Nagle, new, belted.
- 1-175-ft. Air, Ingersoll, steam.
- 1-190-ft. Air, American, steam.

PUMPS

- 1-1000-gal. Knowles Single.
- 1-750-gal. Worthington Duplex.
- 1-500-gal. Advance Duplex.
- 40-Scranton, size 6x5½x6, new.

DRYER

- 1-Louisville Steam Dryer, size 6' x 25'.

MALLORY MACHINERY CORPORATION

BALTIMORE

MARYLAND

CASTLE & WILSON, 1601 Arrott Building, PITTSBURGH, PA.

MOTORS

- 1-100 H. P. Crocker-Wheeler, 2200 volts, 60-cycle, 3-phase, slip-ring, 690 R. P. M.

GENERATORS

- 1-150 K. W. D. C. Crocker-Wheeler, 250 volts, 200 R. P. M., engine type.
- 1-200 K. W. D. C. General Electric 200 R. P. M., 3-wire, 125 to 250 volts, with engine.
- 1-200 K. W. Bullock, 220-250 volts, direct current, 450 R. P. M., 2-bearing.

ENGINES

- 13 and 22½x30" Buckeye 16½x30" Buckeye
- 12x16" Buckeye. 12 and 21x27" Buckeye 18½x24" Buckeye

WATER TUBE BOILERS

- 4-264 H. P. B. & W., 160 lbs., Ohio.
- 3-250 H. P. Franklin, 125 lbs. pressure
- 1-400 H. P. B. & W., 150 lbs., Iowa.

AIR COMPRESSORS

- 1-18x18" Duplex, belt driven. 2-23 and 13x20" Sullivan, belt-driven.

Other steam and belt driven compressors on demand.

CONDENSER

- 1-12 and 20x21 Blake Single-cylinder Jet Condenser, brass fitted.

MACHINERY—FOR SALE

ELECTRICAL

DYNAMOS, MOTORS AND
GENERATING UNITS.

POWER PLANT

BOILERS, ENGINES,
PUMPS AND AIR COM-
PRESSORS.

METAL WORKING

MACHINE TOOLS,
PRESSES, LATHES,
PLANERS, MILLING MA-
CHINERY, and etc.

LARGE STOCK OF NEW AND USED
EQUIPMENT ON HAND AT ALL TIMES

THE OBRIEN MACHINERY CO.

119 N. Third St.,

Philadelphia, Pa.

Long-Distance Bell Telephone: Market 21-21.
Cable Address: O'Brien, Philadelphia.

NEW MOTORS—Immediate Shipment

Quan.	H.P.	V.	R.P.M.	Type	Make
3	25	220	850	K	R. & M.
1	40	220	1200	B	Fairbanks-Morse.
1	40	220	1200	H	Fairbanks-Morse.
1	40	440	900	H	Fairbanks-Morse.
1	50	440	900	H	Fairbanks-Morse.
1	50	220	1200	H	Fairbanks-Morse.
1	50	440	850	AN	Allis-Chalmers.
1	75	440	900	B	Fairbanks-Morse.
1	75	220	865	AN	Allis-Chalmers.
1	150	2200	600	Q	Crocker-Wheeler.

GEO. F. MOTTER'S SONS

Steam and Electrical Engineers

YORK, PA.

A. C. MOTORS

Immediate Delivery. Large Stock,
Three Phase and Single Phase, Sizes ½ to 50 H. P.
Send Us Your Inquiries Before You Buy.

SEEGER MACHINE TOOL COMPANY,
Machinery and Supplies

34 S. FORSYTH ST.,

ATLANTA, GA.

POWER

Steam Engine Generator Sets,

Dynamos and Motors In Stock.

Our erecting engineers are at your service.

COLEMAN-SHOEMAKER, INC.

COMMERCIAL TRUST BUILDING PHILADELPHIA

**DRYERS
CRUSHERS — GRINDERS — PULVERIZERS**For All Purposes
PLANTS DESIGNED AND EQUIPPED**W. P. HEINEKEN***Engineer and Manufacturer*

95 Liberty Street

New York

1—12" and 54" J. A. Fay Band Rip Saw. 1—54" Gilbert Band Resaw.
 1—Glen Cove 8" 4-side Matcher. 1—Preble 10" 4-side Matcher.
 1—J. B. Hoyt 14" 4-side Matcher. 1—24" 3-drum Berlin Sander.
 1—30" 2-drum Fay. 1—26 x 12 Double Surfer, endless bed type.
 1—48" Circular Resaw—power feed. 1—30" Circular Resaw—power feed.

MOULDERS:

1—7" 3-side Houston. 1—7" 4-side Fay.
 1—9" 4-side Williamsport. 1—7" 3-side Hamilton.
 Boilers, Hoists, Pumps, Engines, Ironworking Machinery, Belting, Shaft-
 ing, Pulleys, Hangers.

THE CLEVELAND BELTING & MACHINERY CO.
1524 University Road CLEVELAND, OHIO**PIPE**

ALL SIZES

SECOND-HAND

FOR ALL PURPOSES

Furnished with new threads and couplings or
cut to specifications.**Fittings, Valves, etc.**We have modern equipment and are prepared to
make prompt shipments.**JAMES F. GRIFFITH**412-24 Moyer Street
Philadelphia, Pa.**NEW AND SECOND HAND
MACHINE TOOLS****HENRY PRENTISS & CO.**

Incorporated

149 Broadway

New York, N. Y.

Warehouse: Jersey City

Pipe, all sizes, bought and sold. What sizes
are you in the market for? What sizes have
you for sale?**PIPE & CONTRACTORS' SUPPLY CO.**

3 Dover Street

NEW YORK

GUARANTEEDNew Used and Rebuilt Machine Tools
of all Types and Sizes
Wood Working Machinery, and Motors

Write for Photographic stock book

We buy complete plants

SIMMONS MACHINE CO., Inc. Albany, New York

BRANCH OFFICES:

801 Singer Building, New York City

86-88 Exchange St., Buffalo, N. Y.

FOR SALE**PIPE SECOND-HAND All Sizes 1/4" to 24"**Furnished with new threads and couplings, suitable for every
practical purpose.
Also large assortment of Contractors' Equipment, Hoisting
Engines, Boilers, Concrete Mixers, etc.; all thoroughly overhauled.**MARINE METAL & SUPPLY CO.**

167 South Street

NEW YORK

Red and Buff Dry Pressed Brick,
Common Building Brick**GEORGIA-CAROLINA BRICK CO.**

HOWARD H. STAFFORD, Pres.

AUGUSTA, GA.

CHEMICAL MACHINERY

Engineering and Designing

Purchasing and Sales Service

New and Used Machinery

GLANDER AND COMPANY

800 Broad Street

Newark, N. J.

MACHINE TOOLS

1—38" x 14' engine lathe, \$1475.00

1—25" x 10' engine lathe,
latest type, \$1850.00

1—20" x 10' engine lathe, \$ 800.00

1—3' Plain Radial Drill, \$ 750.00

1—20" Back geared shaper, \$ 750.00

1—23" Stationary head drill, \$ 335.00

Also planers, millers, grinders, punch presses, etc.

KEMP MACHINERY CO.

BALTIMORE, MD.

TANK & TOWER

35,000 GAL. FLATBOTTOM

STEEL TANK WITH

60 FOOT STEEL TOWER

WILL SELL CHEAP.

HERFURTH ENGINE and MACHINERY CO.
ALEXANDRIA, VA. CAMDEN, S. C.**PIPE FOR SALE.**From 1" to 20" New and second-hand at less
than one-half price. All makes Rotary
Drilling rigs in stock.**Brooks Supply Company**

Beaumont,

Texas

**WATER PIPE AND RELAYING RAIL
FOR SALE**10,000 ft. almost new 6" iron water pipe
5,000 ft. 10" Class B cast iron water pipe
100 tons 80 lb. relaying rail
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We sell all kinds and any kind of tanks andNew and used tanks in any part of the country.
Steel storage and pressure tanks

" and wood rectangular "

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112" dia. x 14'	10 "	long.	7,500 gallons.
112" dia. x 19'	8 "	long.	10,000 gallons.
120" dia. x 10'	2 1/2 "	long.	6,000 gallons.
120" dia. x 13'	6 1/2 "	long.	8,000 gallons.
120" dia. x 15'	2 1/2 "	long.	9,000 gallons.
120" dia. x 20'	2 1/2 "	long.	12,000 gallons.
120" dia. x 25'	2 1/2 "	long.	15,000 gallons.
120" dia. x 28'	10 "	long.	16,000 gallons.
120" dia. x 30'	2 1/2 "	long.	18,000 gallons.
120" dia. x 33'	5 1/2 "	long.	20,000 gallons.
120" dia. x 35'	2 1/2 "	long.	21,000 gallons.
120" dia. x 40'	2 1/2 "	long.	24,000 gallons.
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Both Cranes complete with outriggers.
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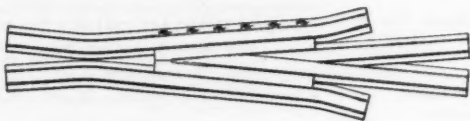
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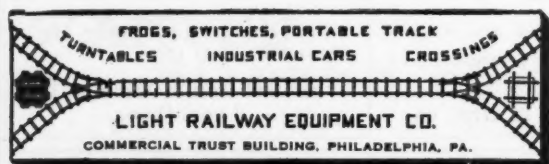
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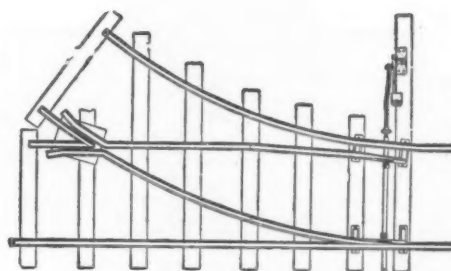
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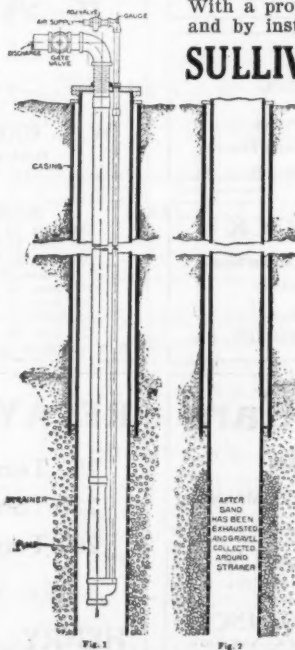
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Avoid Sand Well Troubles

Wells drilled in sand, or sand and gravel formation are subject to clogging of the strainer, resulting in a reduction of output or even in "losing" the well.

With a properly designed strainer, and by installing the

SULLIVAN AIR LIFT



system of pumping and "Back-Blowing," clogging can be—and is prevented. Results are partly shown in these two sketches.

In Fig. 1 is shown a properly designed strainer, which admits the fine materials, but keeps out the coarser particles.

Fig. 2 illustrates the gravel collected around the strainer after the finer sand has been drawn into and pumped out of the well. It is seen that this treatment forms a "gravel" strainer outside of the metal one and increases the inflow area—keeps the openings of the screen full and open, and increases the capacity of the well.

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*will not freeze—
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Atlas Non-Freezing is made in five grades, thus covering all blasting requirements.

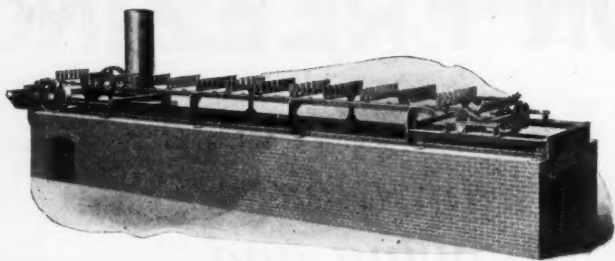
Tell us what explosive you are using now and we will tell you what grade of Atlas Non-Freezing will do the work and save you the inconvenience which attends the use of explosives that are not immune from the effects of cold.

ATLAS POWDER COMPANY Wilmington, Delaware

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NO DUST LOSS WITH THIS DRYER

Use it for drying dusty materials like concentrates

TO get away from the difficulty of excessive dust loss when drying fine materials (concentrates, clays, oxides), there was developed, nearly twelve years ago, the Bartlett & Snow Style R Dryer.

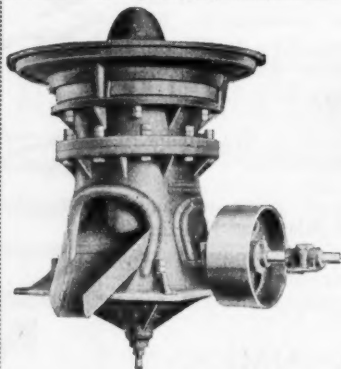
Essentially this machine consists of a long chamber which has a furnace at one end and which is covered by a cast iron trough. In this heated trough the material is gently rabbed by a series of slowly-moving rakes and at the same time gradually carried to the end, where the dry material is continuously discharged.

The fuel consumption of this machine, though higher than that of rotary dryers, is not excessive. The product is uniform and there is no dust loss.

A fair average capacity on normal materials carrying about 10 per cent of moisture is four pounds of water per hour per square foot of trough. The fuel consumption is about one pound of coal of 13,000 B. T. U. for every three pounds of moisture evaporated. The power consumed is close to one horsepower hour per ton.

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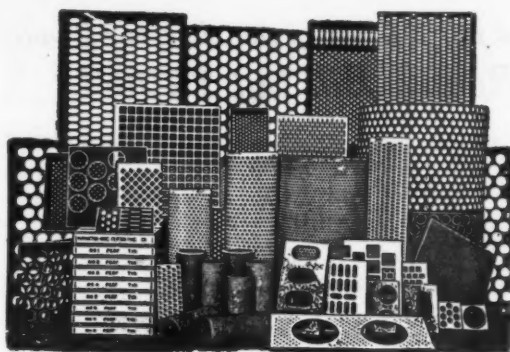
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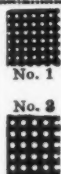
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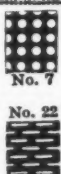
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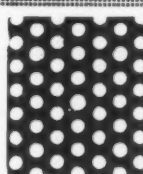
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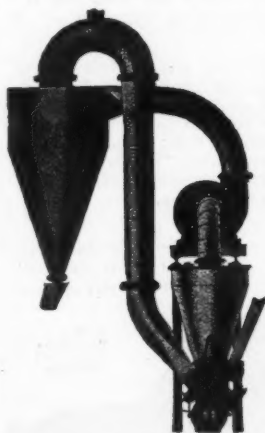
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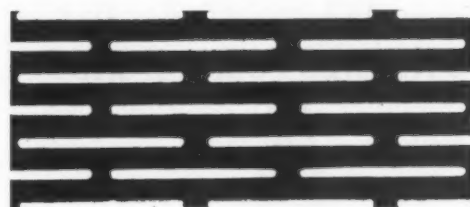
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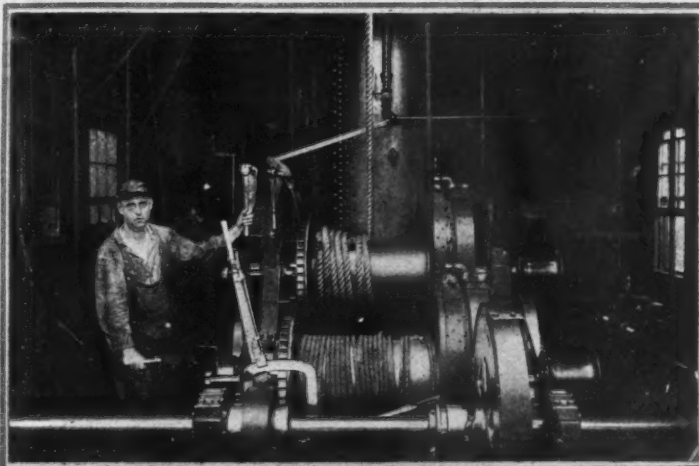
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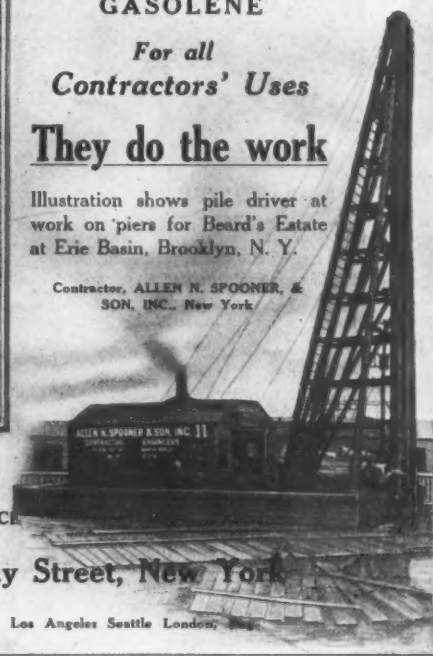
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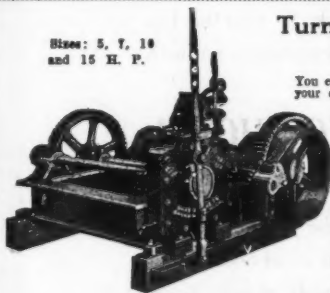
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One lever starts, stops and reverses it, and when the throttle is closed the brake is automatically applied to the drum.

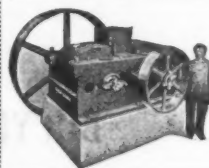
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Used for reducing product from Jaw Crushers

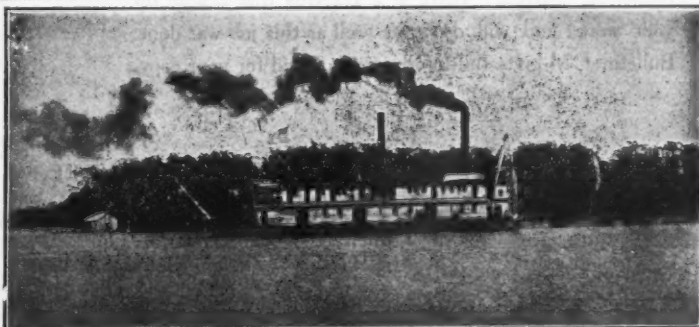
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Speed and efficiency like this are characteristic of Bucyrus Revolving Shovels. There is a Bucyrus that is built for your work, and will do it as well as this job was done. Bulletin C-M gives full information. Send for your copy.

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The model 21 is a decided advance in light steam shovels, with real and new possibilities!



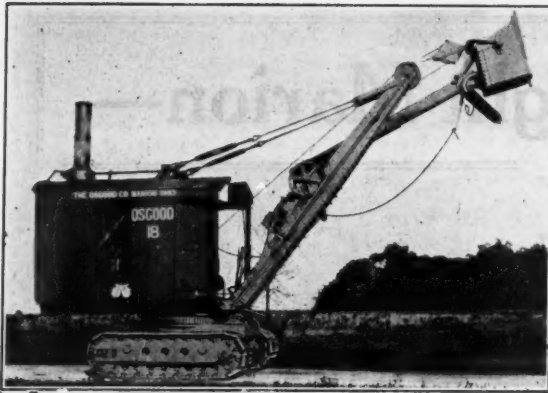
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The big point is that all who have digging to do, should know the new Marion model

21. For your convenience we have prepared a separate bulletin, MARION MODEL 21, and we shall be glad to send a copy if you will drop a line.

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STEAM SHOVEL CO.
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OSGOOD 18— $\frac{1}{2}$ cu. yd. Revolving Steam Shovel
Mounted on Continuous Tread.



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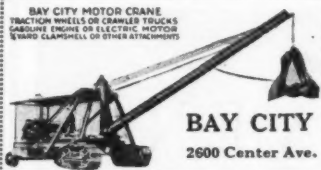
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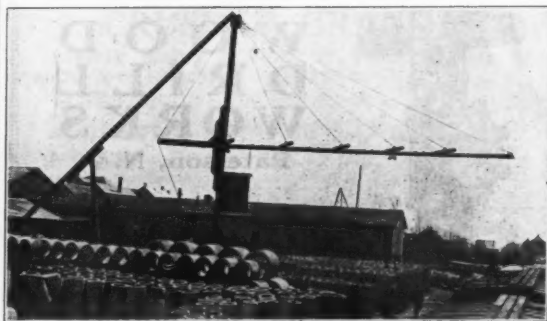
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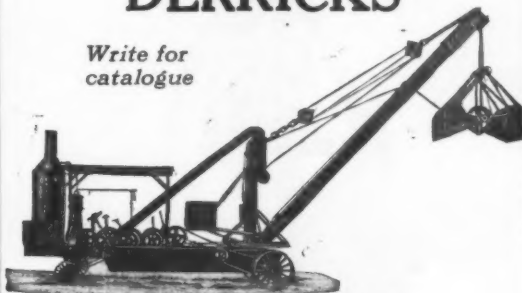
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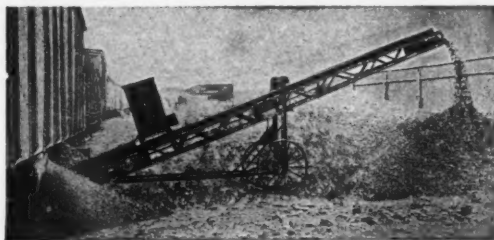
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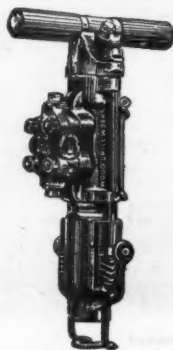
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Load your cars the instant they move up—the Haiss Portable Conveyor has a continuous capacity of 100 to 150 yards an hour at a cost of ½ cent per yard for power.

It is portable—goes anywhere

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Do you want your county to spend YOUR good money on roads that will wear out before your bonded indebtedness is liquidated?

I SAY YOU DON'T.

What you want is a hard-surfaced road, with little cost for maintenance—a road that can be traveled in rain or snow, summer and winter. You want a PERMANENT road—that means CONCRETE!

Write for Literature—It's Free

DIXIE PORTLAND CEMENT CO.
CHATTANOOGA, TENN.

ASPHALTS

IN TANK CARS

FREEPORT GAS COMPANY

Paving Asphalts
Roofing Asphalts
Road Oils
Flux

Fuel Oil
Gas Oil
Navy Fuel Oil
Mexican Crude

SALES OFFICE

Carter Bldg. Houston, Texas

Shipping Point & Refinery
Bryanmound, Texas

Also facilities for shipping in
steel drums.

National Cement Company

Manufacturers of

High Grade Portland Cement



Output 50,000 barrels monthly. No old contracts on our books, hence prompt shipment.

Sales Department
Empire Building - Birmingham, Ala.
Plant
Ragland - Alabama

CRUSHED LIMESTONE

Best for All Purposes

We manufacture all sizes of stone suitable for all classes of road building and concrete work where only a high-grade limestone is required.

Quarries opened up in 1912.

Capacity 4000 tons daily

Quarries:

Blue Ridge, Va. Pembroke, Va. Pounding Mill, Va.

W. W. BOXLEY & COMPANY

First National Bank Building, - ROANOKE, VA.

Southern States Portland Cement



We produce only one grade

THE HIGHEST

ALWAYS UNIFORM

Southern States Portland Cement Co.

Office and Mills—ROCKMART, GA.

Asphalt Filler
Asphaltic Roadway Gravel
Roofing Gravel



AMERICAN LIMESTONE COMPANY

McNutt Building
KNOXVILLE, TENNESSEE

CONCRETE STREETS

Permanent Construction

Low Maintenance

Concrete streets stand up under all kinds of traffic. They are sanitary, durable and the cost of upkeep is unusually low compared with other types.

Any community planning to improve its streets can adopt concrete with assurance that it will not only prove a real investment but always be an evidence of progressiveness.

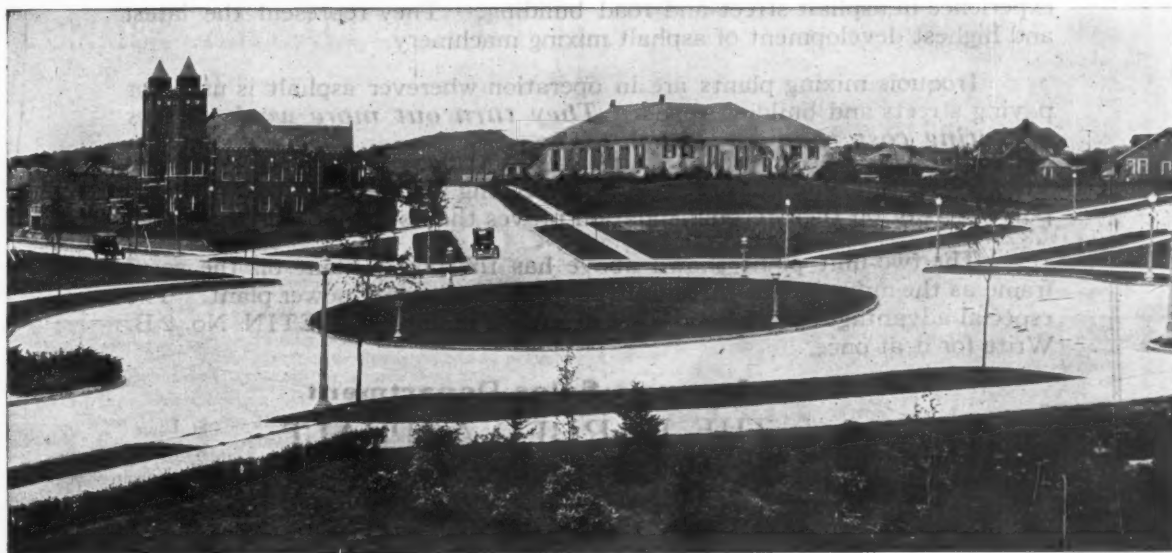
Kingsport, Tenn. has been using this type of construction since 1916 and today they boast of $8\frac{1}{2}$ miles of concrete pavement that has met every traffic requirement and is costing practically nothing to maintain.

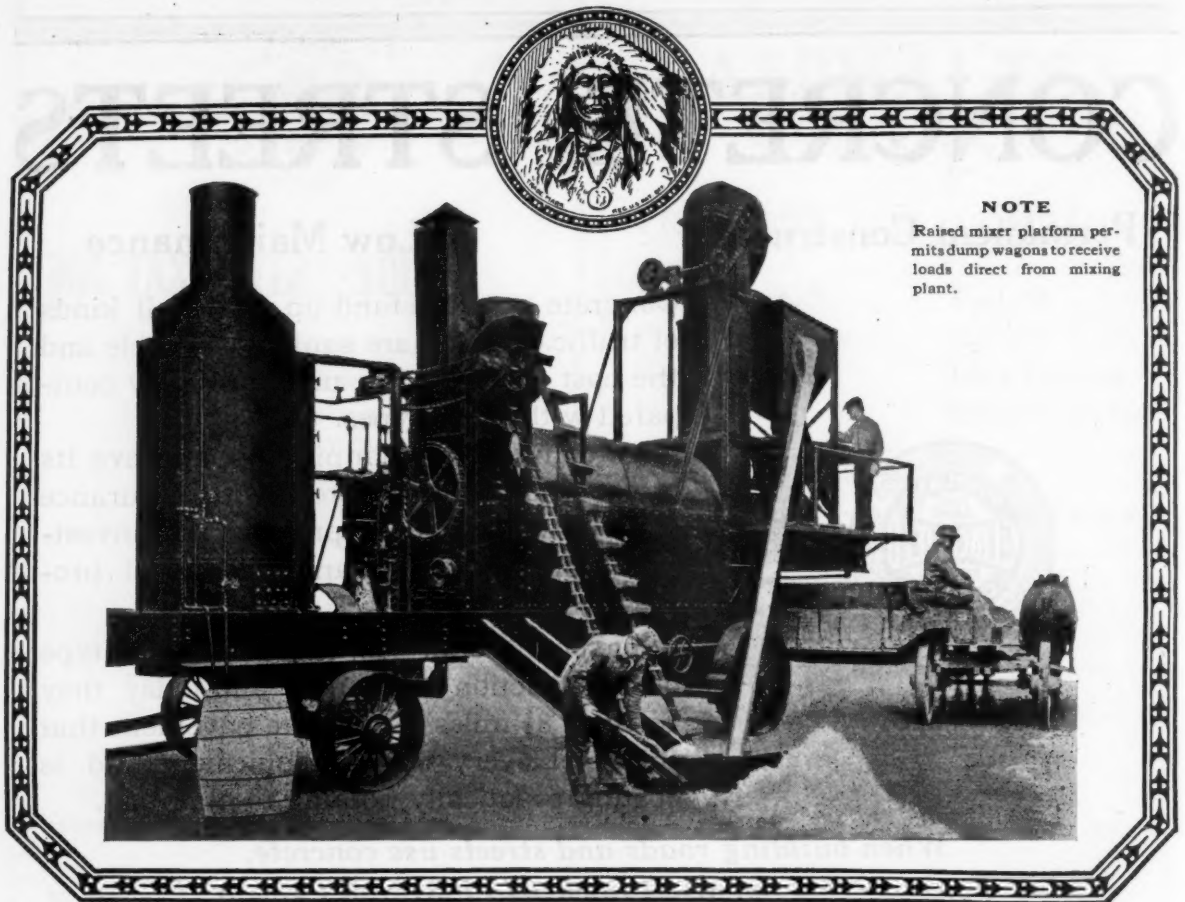


*When building roads and streets use concrete.
For your concrete use Clinchfield Portland Cement.*

CLINCHFIELD PORTLAND CEMENT CORP.

Office and Mills: KINGSPORT, TENN.



**NOTE**

Raised mixer platform permits dump wagons to receive loads direct from mixing plant.

IROQUOIS (TWO-UNIT) ASPHALT MIXING PLANT.

Product of 40 years' experience.

Iroquois Portable Asphalt Mixing Plants are the product of forty years' experience in asphalt street and road building. They represent the latest and highest development of asphalt mixing machinery.

Iroquois mixing plants are in operation wherever asphalt is used for paving streets and building roads. *They turn out more work at less operating cost than any other make.*

The fact that most of our orders for these mixing plants come from previous purchasers or on their recommendation proves their superior worth.

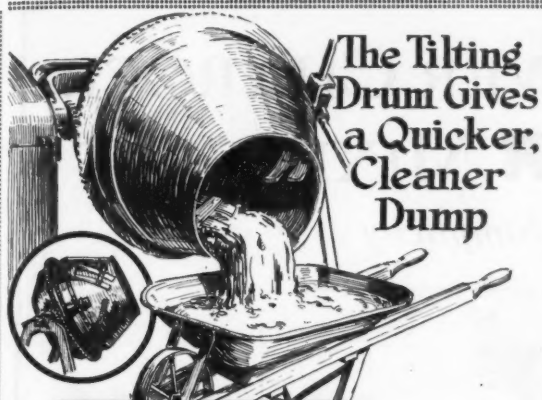
The two-unit plant shown above has the power plant on the same frame as the mixer. The three-unit plant has a separate power plant. The especial advantages of each type are described in our BULLETIN No. 2 B. Write for it at once.



New York
Chicago
Pittsburgh

Iroquois Sales Department
THE BARBER ASPHALT
COMPANY
PHILADELPHIA

St. Louis
Kansas City
San Francisco
Atlanta



The Tilting Drum Gives a Quicker, Cleaner Dump

THERE is really just one way to get a batch of concrete out of the drum into the barrow—quickly, easily, completely. That's to pour it out.

The Jaeger tilting drum gets rid of a batch as quickly and easily as emptying a bucket of water. It doesn't dip. It tilts and pours—the only action for speed and economy. And those are the factors that spell profit on any concrete job.

Twelve thousand contractors use the Jaeger. They count on—and get—A MIX A MINUTE. Consider this in choosing your mixer. For every concrete job there's a Jaeger that exactly fills the bill. Write for our catalog today.

The Jaeger Machine Co.
115 Dublin Avenue
Columbus, Ohio.



ARE YOU READY

Is your Plant equipped to take care of the increase in orders that are on the way.



CONVEYING MACHINERY

will help increase the output and cut the overhead.

No matter what you want to handle—Raw Materials or Finished Product—there's a Weller System to handle the Product.

Tell us what you want to handle.

SPECIAL CATALOGUE
will be sent.

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ROAD BUILDING EQUIPMENT

A full line of contractors
supplies and equipment

Sales representatives for
Acme Road Machinery Co.
National Portable Conveying Co.

HAMPTON ROADS EQUIPMENT CO.
251-252 ARCADE BUILDING, NORFOLK, VA.

ROBINS CONVEYING MACHINERY

The "Robins Hand Book of Conveyor Practice" will help you solve your conveying problems. Write for a copy.

ROBINS CONVEYING BELT COMPANY

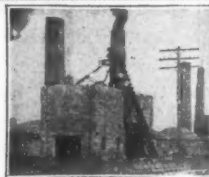
New York, 13-21 Park Row. Chicago, Old Colony Building.
Pittsburgh, Union Arcade Bldg. San Francisco, The Griffin Co.
Toronto, Gutta Percha & Rubber, Ltd. Birmingham, Ala., C. B. Davis Eng. Co.
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All Types and Sizes

THE F. D. CUMMER & SON CO.

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Elevating and Conveying Equipment

also a full line of steel and malleable buckets, chain and sprockets.

THE COLUMBUS CONVEYOR CO.
Columbus, Ohio

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MIXERS
BUILDING & PAVING

HOISTS
GASOLINE & ELECTRIC

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EQUIPMENT

BUILT OF STEEL
HYATT ROLLER BEARINGS

Write now for our down-to-bedrock prices and easy terms on the famous Boss line.

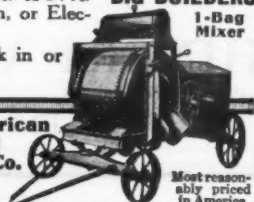
HOISTS



Gas
or
Electric

All sizes from 3 ft. to 24 ft. cap. Gas, Steam, or Electric.

BIG BUILDERS
1-Bag Mixer



Complete stock in or near your city.

The American
Cement
Machine Co.
Inc.
Keokuk, Iowa

Most reasonably priced in America.

National Conveyors Handle Anything



SAYS Mr. F. H. Bein, Master Mechanic of John Deere Wagon Works:

"We have used it on COAL, ASHES, GRAVEL, SAND AND RUBBISH. It will handle any of these to perfection. Under certain conditions it saves the labor of six to ten men."

OUR COMBINATION CONVEYOR will handle your materials at a fraction of the present cost.

LOAD AND UNLOAD, PILE AND STORE WITHOUT SHOW-ELING.

Descriptive Conveyor Bulletin on request.

NATIONAL CONVEYING EQUIPMENT CORPORATION

1752-1772 N. Kolmar Ave., Chicago, Ill.

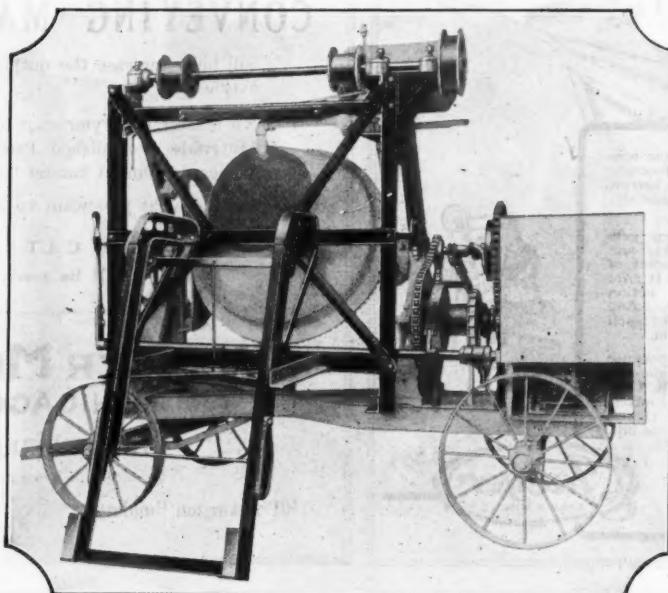
The SUPERIOR POWER CHARGER of a **WANDER** MIXER

Note Its Sturdy Simplicity

*Heavy angle framing
built into the under-
structure*

*Oversize shaft and
bearings*

*Folding legs—stiff
when in position, re-
lieving all strain to
the superstructure,
skids and axle bear-
ings. Folds as illus-
trated for moving*



*Liberal use of batter
bracing, cross mem-
bers and heavy gus-
set plate*

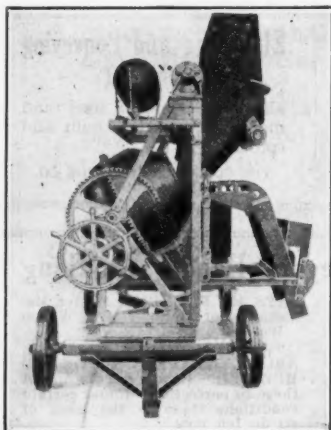
*Efficient and accessi-
ble hoist and clutch
assembly*

*Track design—easily
extended to any
depth you wish a
stock pile*

Showing loader—bucket removed.

GROUND CHARGING

is possible only with a power loader. Any mixer that must be loaded from a platform is NOT a low charging one. Some platforms may be lower than others but the mixer that can be charged AT THE GROUND LEVEL is one with a LOADER.



Showing legs
folded and bucket
raised for mov-
ing.

The **WANDER** track loader saves time because the travel is so short, and because, requiring much less power, can be run faster with the same engine than other types. This gives MORE BATCHES PER HOUR allowing same time for mixing.

Ask for Catalog M-33.



Mixer raised—
track extended to
charge mixer on
same level with
material piles.

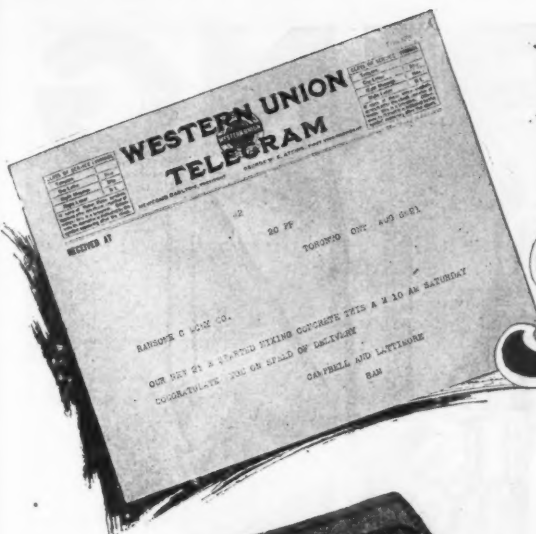


CONSTRUCTION MACHINERY COMPANY

Formerly Waterloo Cement Machinery Corporation

135 VINTON STREET

WATERLOO, IOWA



Here's Service for You *Ransome* of course

July 30th Campbell & Lattimore, of Toronto, placed an order at the factory for a 21-E Ransome Paver to be sent to St. Catharines, Ontario.

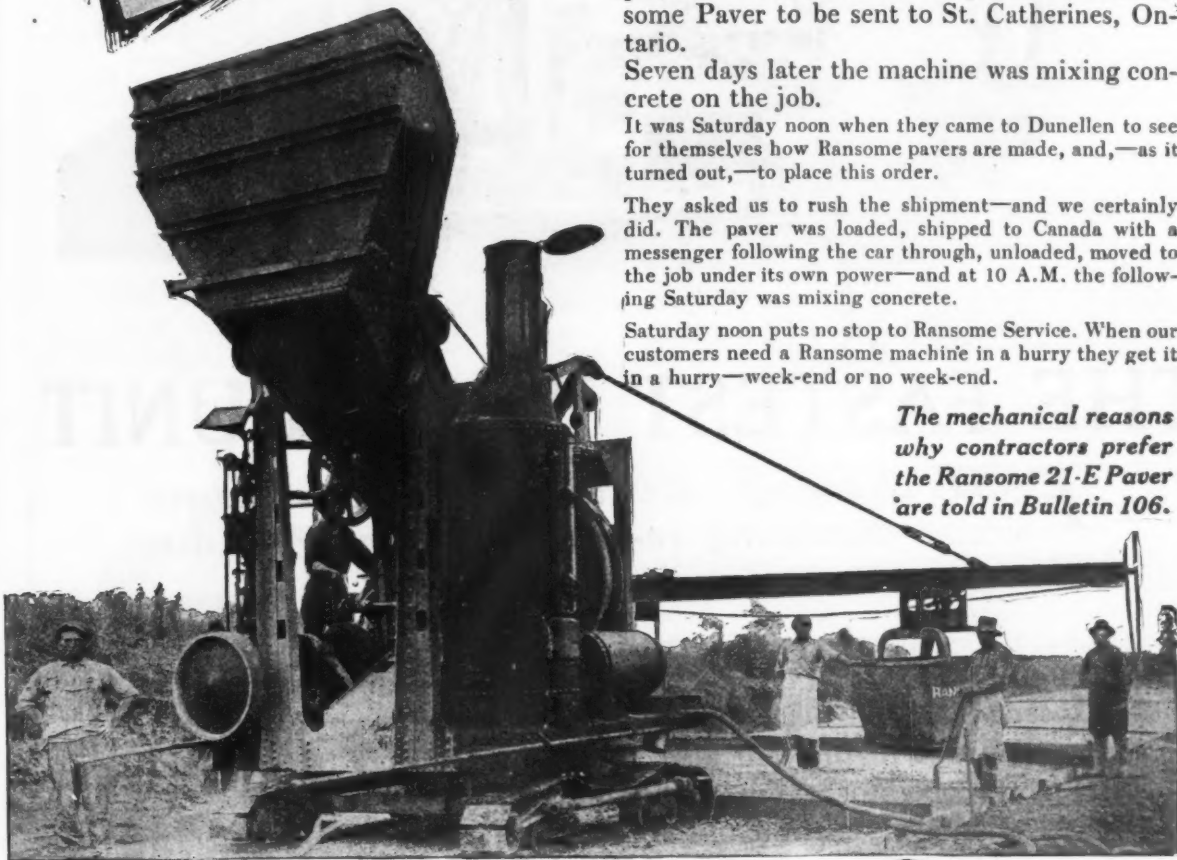
Seven days later the machine was mixing concrete on the job.

It was Saturday noon when they came to Dunellen to see for themselves how Ransome pavers are made, and, —as it turned out,—to place this order.

They asked us to rush the shipment—and we certainly did. The paver was loaded, shipped to Canada with a messenger following the car through, unloaded, moved to the job under its own power—and at 10 A.M. the following Saturday was mixing concrete.

Saturday noon puts no stop to Ransome Service. When our customers need a Ransome machine in a hurry they get it in a hurry—week-end or no week-end.

*The mechanical reasons
why contractors prefer
the Ransome 21-E Paver
are told in Bulletin 106.*



Ransome 21-E PAVER

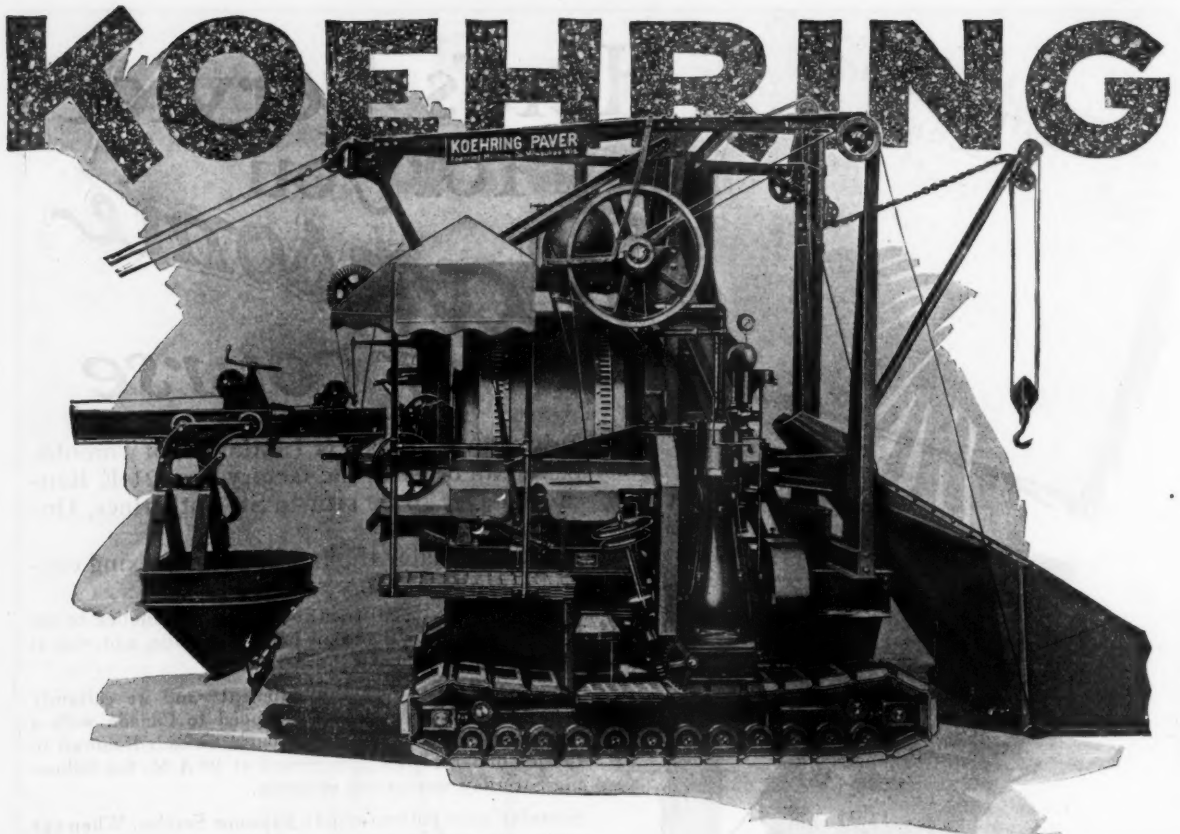
RANSOME CONCRETE MACHINERY CO.

1770 Second Street, Dunellen, N. J.

Manufacturers of Mixers, Pavers, Pneumatic Mixers, Chuting Plants, Hoist Buckets, Bins, Cars, Carts, Etc



31-208



THE FASTEST PAVING UNIT

FAST charging. Extra *liberal* drum dimensions. Koehring *re-mixing* action. Fast *dis-*charging. Fast *distributing*.

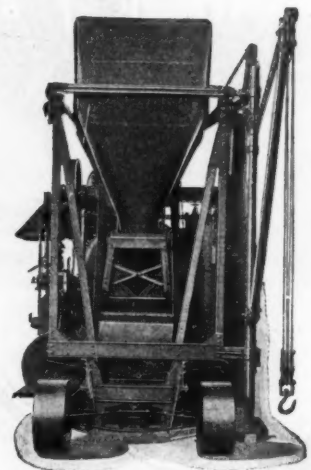
All the operations of getting aggregate into the drum, and concrete on the subgrade *speeded* up, and tied together by *automatic* actions, and highly centralized control which enables operator to *maintain* top capacity operation every minute of the day.

Higher speed, extra yardage operation — yes — and without the penalty of fast depreciation, high maintenance cost, or greater cost of breakdowns and delays. The Koehring Paver—fastest paving unit—is the *heavy duty* *extra yardage* mixer. Write for catalog P.

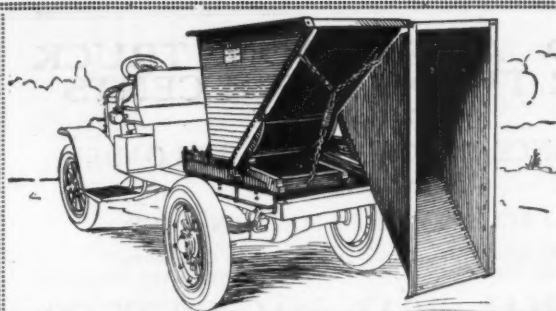
KOEHRING COMPANY

Milwaukee

Wisconsin



The Koehring charging skip easily loads direct from trucks. The Koehring loading derrick mast automatically lowers to subgrade when derrick takes on load, decreasing strain on mixer frame — automatically raises when load is released. No interference with movement of the mixer.



CUT YOUR HAULING COSTS

By Equipping Your Trucks With

MANDT

OVER 30 YEARS A MARK OF QUALITY

Automatic Steel Dump Bodies

Dump Faster—Clean Better—Last Longer

Built for Heavy Duty Work—Over-sized Throughout
Single or Dual Types, fits 1, 1½, 2, or 3 ton trucks. Several Sizes, ½ to 2 yd. capacities.

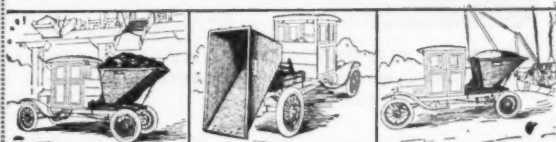
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Experts to Assist
You—Everywhere

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Principal Cities
in United States
and Canada



One of 3 ERIES
owned by Blakes-
lee & Sons. Only
12 ft. between
curb and car
track, but work-
ing without in-
terruption to traf-
fic.



Cutting a
new subgrade
through hard
macadam

"We tore up the hardest
macadam roadbed that I ever
saw, without a repair, although
we wore out the dipper
teeth. And the ERIE left the
road smooth and true to grade."

—E. N. Clark, Supt., C. W. Blakeslee & Sons,
New Haven, Conn. (owners of 3 ERIES).



Any ERIE
easily and
quickly
changed over
to locomotive
crane for un-
loading cars
of stone,
gravel, etc.

The ERIE is the right shovel for road
and street building. It cuts a smooth
level subgrade, and gives big yardage
even in hard material. Write for Bulletin
H, showing just what the ERIE
can do.

BALL ENGINE CO., Erie, Pa., U. S. A.
Builders of ERIE Steam Shovels and Cranes

ERIE

Revolving
Shovels



"ERIE"
Tandem
Steam
Rollers

for
**STRENGTH
DURABILITY
SIMPLICITY**

and

ECONOMY of OPERATION and LONG LIFE

Ask for Catalog "M"

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ERIE, PENNA., U. S. A.

SLUICE GATES

Shear, Flap and Butterfly Valves

FLEXIBLE JOINTS

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MILLER FLUSHTANK SIPHONS

SIMPLE, RELIABLE, AUTOMATIC

Also Sewage-Disposal Apparatus, Automatic Sewage Ejectors,
Centrifugal Pump Outlets, Sewer Jointing Compounds.

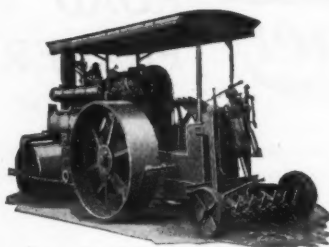
PACIFIC FLUSH-TANK CO.

Write nearest office for catalog interested in.

CHICAGO

NEW YORK

Kelly-Springfield Rollers



ROLLER WITH SCARIFIER

FOR MORE THAN 30 YEARS OUR ROAD AND STREET ROLLERS HAVE
BEEN USED BY CONTRACTORS, CITIES, COUNTIES AND GOVERN-
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SOUTHERN STATES.

In Addition to ALL SIZES AND STYLES—2½ TO 20 TONS

Both Steam and Gasoline

WE BUILD

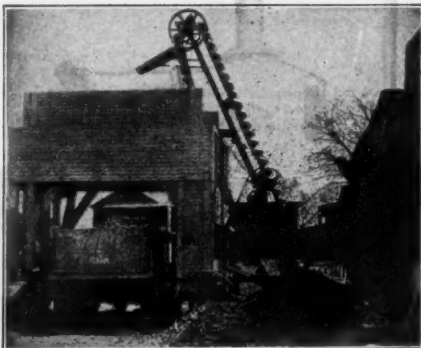
SPECIAL MAINTENANCE ROLLERS

And

SPUR-GEARED TANDEM

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SPRINGFIELD, OHIO, U. S. A.



LOAD A FIVE-TON TRUCK FOR TWENTY-FIVE CENTS

BY USING A

RELIANCE PORTABLE CAR UNLOADER
AND ONE MAN

CAPACITY 25 TO 35 TONS AN HOUR

BEARS THE USUAL GENEROUS RELIANCE GUARANTEE
PRICES QUOTED WILLINGLY DELIVERIES MADE PROMPTLY

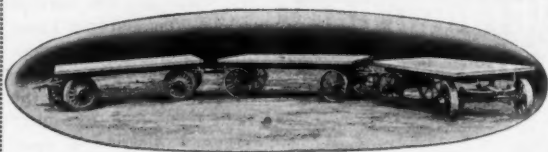
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Reliance Road Building-Labor Saving Equipment



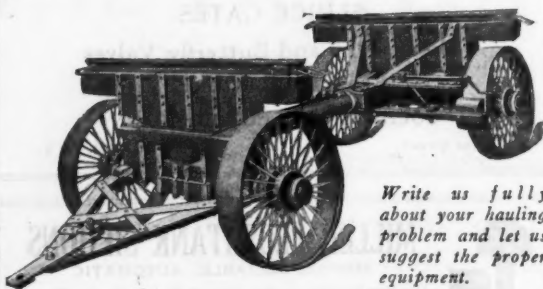
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STEEL WHEELS, steel and wood axles, any size and capacity for every requirement.



*Write us fully
about your hauling
problem and let us
suggest the proper
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None Stronger. None Lighter.
All Steel and Fool-Proof.

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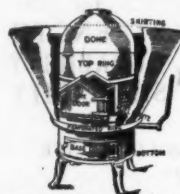
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(With or without External Gratings)

A portable machine, daily capacity 5 to 7 tons.



This dryer has a low first cost, is easily and cheaply operated and guaranteed dry sand.

The low cost makes it valuable for companies needing dry sand on two or more jobs at the same time, thereby eliminating the handling cost of one point only.

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For Contractors, Railroads,
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JONES' PATENT

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**Durable, Strong
and Will Not Rust**

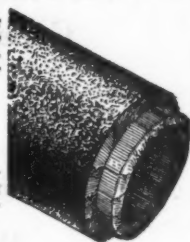
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Specified by leading engineers everywhere. It is economical, both in laying and upkeep. Will not rust or clog. Insist on Michigan Pipe all the time.

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Ludlow Gate Valves work equally well with pressure either side of Gate.

Made of iron and bronze of the highest grade by the most skilled workmen obtainable.

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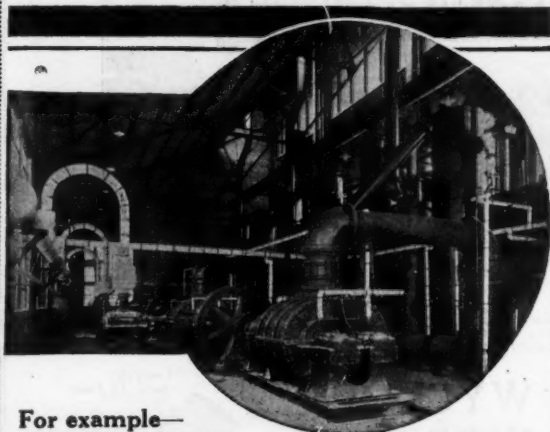
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**CAST-IRON Water and Gas
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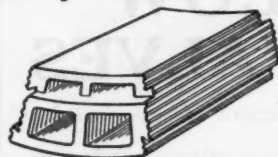
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For the last HALF CENTURY we have been the largest Manufacturers in the South of Vitrified Sewer Pipe, Vitrified Highway Culvert Pipe, Segment Blocks, Hollow Tile, Septic Tanks, Flue Lining, Wall Coping, Tile Silos, Drain Tile, Chimney Tops.

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Chattanooga Sewer Pipe Works
Chattanooga, Tenn.

1921

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NATIONAL

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*was the logical choice for this magnificent
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Considering the care devoted to every detail of design, construction and furnishing, it is only logical that the safety of such magnificence should be insured by the installation of pipe which had proved reliable in similar buildings.

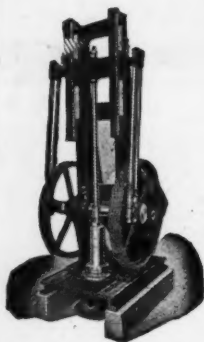
Therefore, "NATIONAL" Pipe was used in the heating, plumbing, power, refrigeration and other lines in this as in many other of America's finest buildings, as shown in "National" Bulletin No. 25—"NATIONAL" PIPE IN LARGE BUILDINGS. Ask for your copy.

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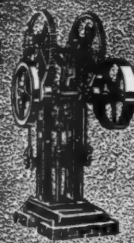
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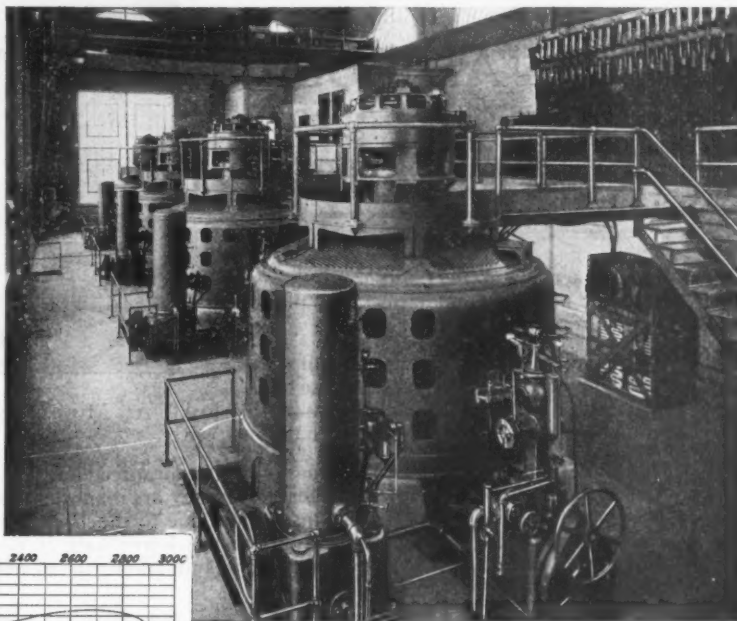
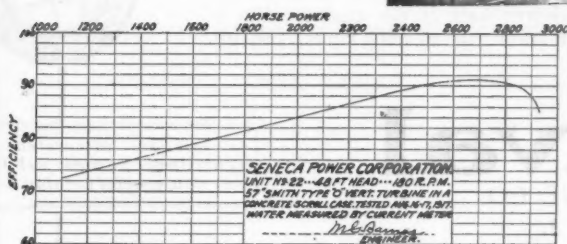
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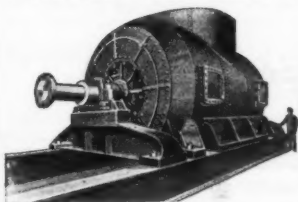


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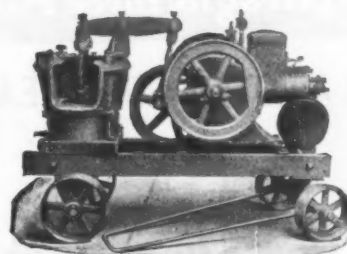
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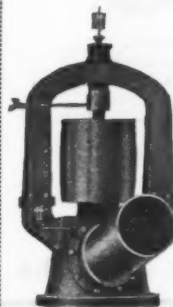
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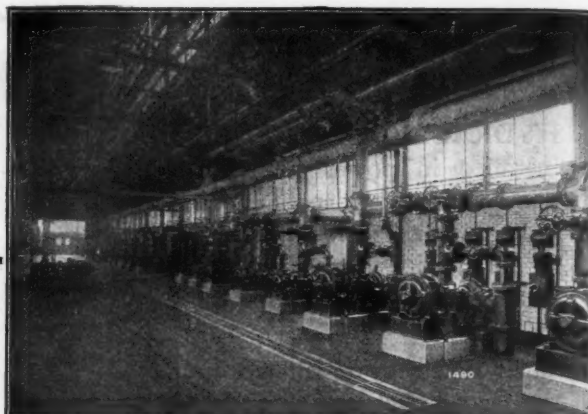
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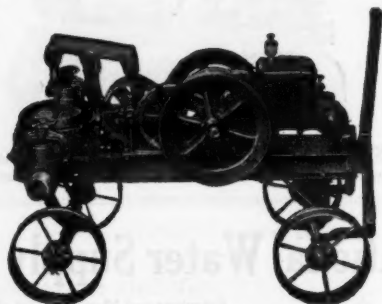
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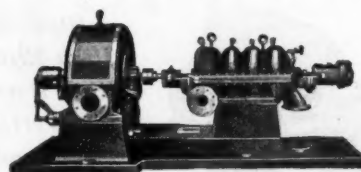
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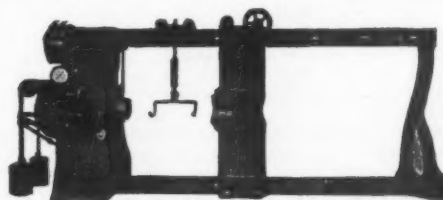
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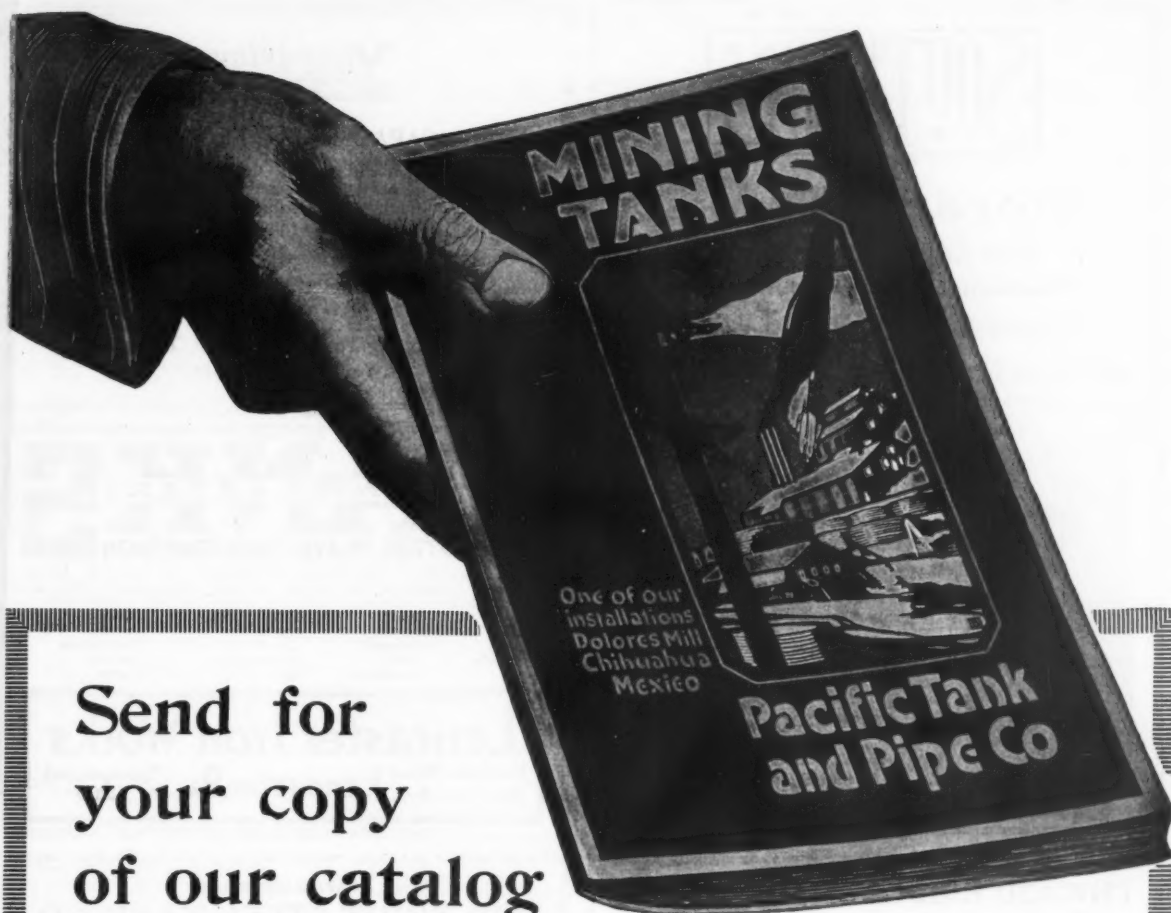
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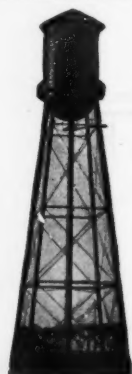
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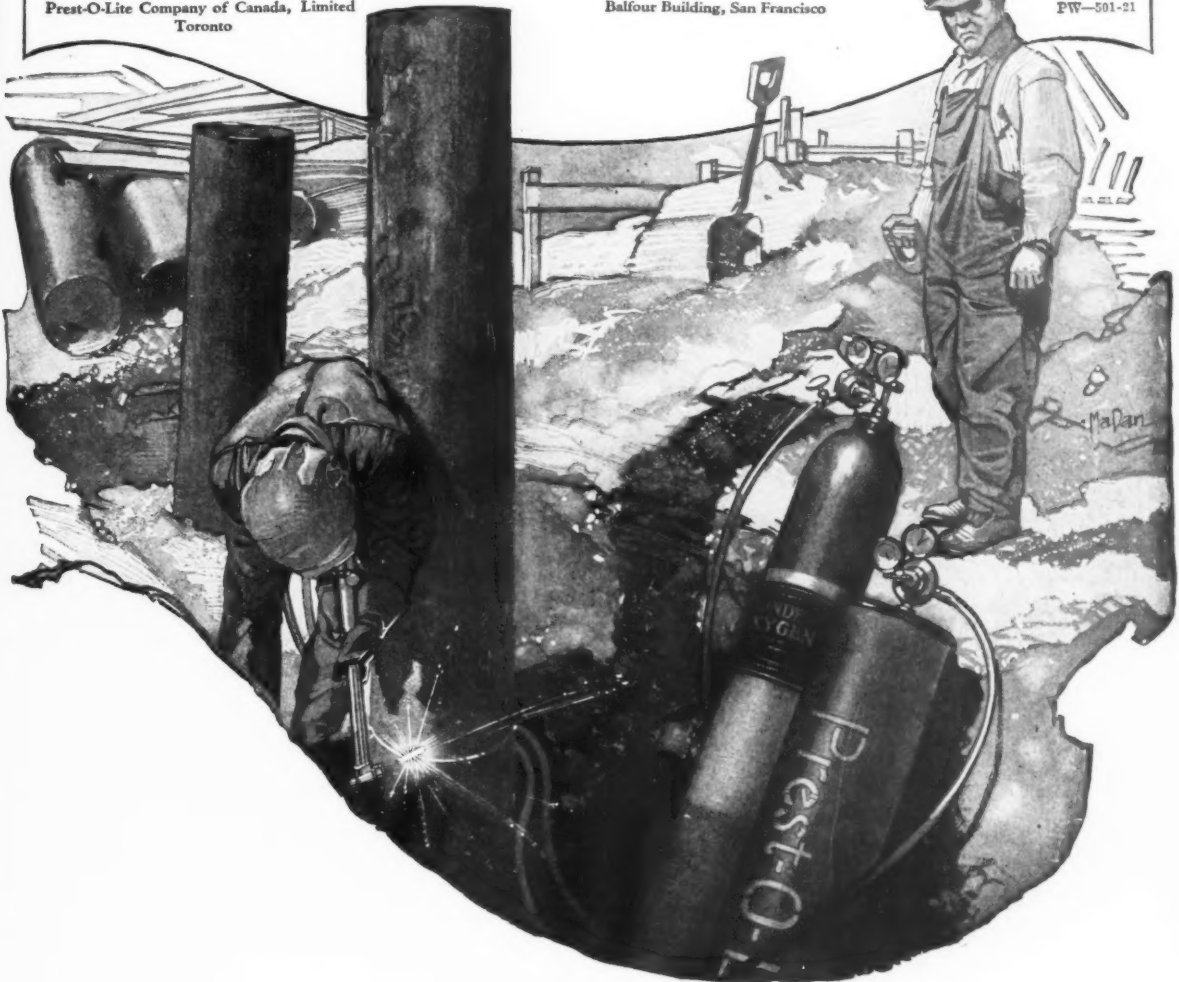
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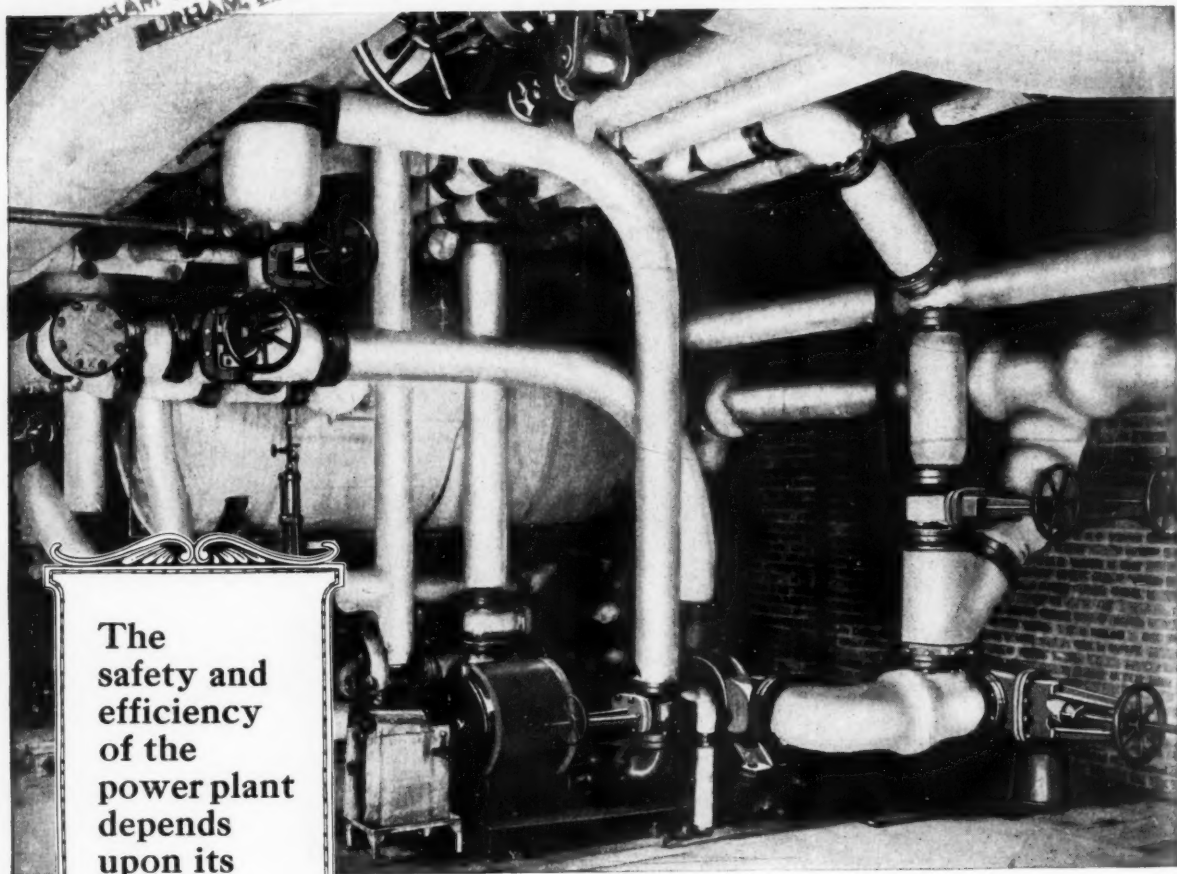
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